TAPR PIC Development and Technical Issues Special Interest Group Archive, January 2001 through May 2003

January 2001 through May 2003

TAPR's technical forum for Microchip PIC development and PIC-based TAPR projects, including the PIC-E and PIC Encoder kits, firmware, GPS interfaces, telemetry, packet-radio devices, construction, debugging, and hardware modifications.

This volume contains 27 original monthly files and 703 messages, arranged chronologically. The PDF is a readable access copy: MIME transfer encodings are decoded, HTML bodies are converted to plain text, and non-text attachments are represented by descriptive notes. The raw source text is supplied separately with the Internet Archive item.

This discussion archive complements the separately curated TAPR PIC-E and GPS-E kit software item.

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January 2001

Original source file: picsig.0101
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0101

1. [picsig] Where has you all gone?

From: "KPo_LH Mobilradio A/S" <kpo@lhmobil.dk>
Date: Fri, 19 Jan 2001 02:12:38 +0100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-130179-2001.01.18-19.29.38--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello every one

Have the members gone somewhere else, I have received nothing since x-mas ?

Kurt de OZ7OU
[Attachment: Kurt Poulsen.vcf; text/x-vcard; 407 bytes]

2. [picsig] Where have I gone....

From: Mark Cheavens <mcheavens@usa.net>
Date: Fri, 19 Jan 2001 19:29:38 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-130359-2001.01.19-19.52.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

That's easy to figure out!

http://map.findu.com/kc5eve-9

Mark
KC5EVE
http://cheavens.eyep.net/mark

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] Win2k & Picprog

From: "Andrew Davidson" <adavidson@xtra.co.nz>
Date: Fri, 26 Jan 2001 19:58:01 +1300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-131283-2001.01.26-01.12.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have just finished building my Pic-E, and cannot program it as I am
 running Win2k. I see by reading the archives, that other people
 have had the same problem, but have not seen a solution.
I see that someone suggested using pixe, however I need to know what type of
programmer to tell pixie to look for?

Cheers
Andy

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] Re: Win2k & Picprog

From: John Hansen <john@hansen.net>
Date: Fri, 26 Jan 2001 09:03:20 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-131292-2001.01.26-08.17.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Andy:

I think that they may be referring to the PIXIE program that I wrote. It
has sometimes been effective on computers running WinNT, but I guess I've
missed the reports about using it with Win2K. However it should work
because it uses API calls, rather than manipulating the port lines
directly. In testing it with a lot of different computers, I found that it
worked with most, but by no means all. I seemed to have better luck with
Intel processors than AMD, though it has been suggested that this is

probably due to the motherboard rather than the processor itself.

If you use PIXIE, you don't need to specify the type of programmer that you
are using, because it is designed only to work with the Ludi style
programmer... which is the type contained on the Pic-E. Perhaps you are
thinking of PIX, which does require the specification of a programmer type.

If you decide to test it with PIXIE, please drop me a note and let me know
whether it works or not.

Thanks, John W2FS
john@hansen.net

At 07:58 PM 1/26/01 +1300, you wrote:
> I have just finished building my Pic-E, and cannot program it as I am
> running Win2k. I see by reading the archives, that other people
> have had the same problem, but have not seen a solution.
>I see that someone suggested using pixe, however I need to know what type of
>programmer to tell pixie to look for?
>
>Cheers
>Andy
>
>
>---
>You are currently subscribed to picsig as: john@hansen.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] RE: Win2k & Picprog

From: "Richard Carter" <rich.carter@windriver.com>
Date: Fri, 26 Jan 2001 10:12:11 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-131305-2001.01.26-09.21.34--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Try pix113b

regards
Rich - KE1EV

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andrew Davidson
Sent: Friday, January 26, 2001 1:58 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Win2k & Picprog

 I have just finished building my Pic-E, and cannot program it as I am
 running Win2k. I see by reading the archives, that other people
 have had the same problem, but have not seen a solution.
I see that someone suggested using pixe, however I need to know what type of
programmer to tell pixie to look for?

Cheers
Andy

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

6. [picsig] Re: Win2k & Picprog

From: "Andrew Davidson" <adavidson@xtra.co.nz>
Date: Sat, 27 Jan 2001 13:02:33 +1300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Message-ID: <LYR6890-131383-2001.01.26-18.17.07--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi John,
Tried pixie, however the program reports a Verify fail, so not sure where it
has gone wrong !!
Cheers
Andy

> -----Original Message-----
> From: bounce-picsig-22138@lists.tapr.org
> [mailto:bounce-picsig-22138@lists.tapr.org]On Behalf Of John Hansen
> Sent: Saturday, 27 January 2001 3:03 a.m.
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Re: Win2k & Picprog
>
>
> Andy:
>
> I think that they may be referring to the PIXIE program that I wrote. It
> has sometimes been effective on computers running WinNT, but I guess I've
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> because it uses API calls, rather than manipulating the port lines
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> Intel processors than AMD, though it has been suggested that this is
> probably due to the motherboard rather than the processor itself.
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> programmer type.
>
> If you decide to test it with PIXIE, please drop me a note and
> let me know
> whether it works or not.
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> Thanks, John W2FS
> john@hansen.net
>
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] RE: Win2k & Picprog

From: "Andrew Davidson" <adavidson@xtra.co.nz>
Date: Sat, 27 Jan 2001 13:02:48 +1300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-131384-2001.01.26-18.17.28--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have tried Pix113b.

have edited the .cfg file to set Com port (using Com2), and programmer type
to Ludi.

However after the program tries to start the window closes, and a Windows
error message advises it has to close the application because it tried to
Open com 3 (which is not mentioned in the .cfg file)

No joy.
Andy

> -----Original Message-----
> From: bounce-picsig-22138@lists.tapr.org
> [mailto:bounce-picsig-22138@lists.tapr.org]On Behalf Of Richard Carter
> Sent: Saturday, 27 January 2001 4:12 a.m.
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Win2k & Picprog
>
>
> Try pix113b
>
> regards
> Rich - KE1EV
>
> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andrew Davidson
> Sent: Friday, January 26, 2001 1:58 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Win2k & Picprog
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

8. [picsig] RE: Win2k & Picprog

From: "Richard Carter" <rich.carter@windriver.com>
Date: Mon, 29 Jan 2001 09:09:13 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-131710-2001.01.29-08.18.30--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Its been a while since I tried this, but I thought I got it working. For a
while, I used my kid's win-98 machine to load the target, then I think I got
pix113b to work on my win2k machine. I thought port was a command line
argument...

I have some older dos programs that I still run on my win2k machine. The
only way I've managed this is to reboot the machine in dos mode from a
floppy, and run using the floppy. As an example, I have a GPS that gets
waypoints loaded this way. I hybernate win2k, pop in the floppy, turn on
the machine, load the gps, pop out the floppy, and reboot.

I had to make the dos floppy on an older machine.

regards

Rich - KE1EV

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andrew Davidson
Sent: Friday, January 26, 2001 7:03 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] RE: Win2k & Picprog

I have tried Pix113b.

have edited the .cfg file to set Com port (using Com2), and programmer type
to Ludi.

However after the program tries to start the window closes, and a Windows
error message advises it has to close the application because it tried to
Open com 3 (which is not mentioned in the .cfg file)

No joy.
Andy

> -----Original Message-----
> From: bounce-picsig-22138@lists.tapr.org
> [mailto:bounce-picsig-22138@lists.tapr.org]On Behalf Of Richard Carter
> Sent: Saturday, 27 January 2001 4:12 a.m.
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Win2k & Picprog
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> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andrew Davidson
> Sent: Friday, January 26, 2001 1:58 AM
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> Subject: [picsig] Win2k & Picprog
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9. [picsig] RE: Win2k & Picprog

From: "Andrew Davidson" <adavidson@xtra.co.nz>
Date: Wed, 31 Jan 2001 19:06:12 +1300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-131956-2001.01.30-12.20.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yeah, i guess a rebbot with a dos floppy will be the easiest, but obviously
not a nice solution, since it appears there isn't a win2k programmer.

THanks
Andy

> -----Original Message-----
> From: bounce-picsig-22138@lists.tapr.org
> [mailto:bounce-picsig-22138@lists.tapr.org]On Behalf Of Richard Carter
> Sent: Tuesday, 30 January 2001 3:09 a.m.
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Win2k & Picprog
>
>
> Its been a while since I tried this, but I thought I got it
> working. For a
> while, I used my kid's win-98 machine to load the target, then I
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> Sent: Friday, January 26, 2001 7:03 PM
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> Subject: [picsig] RE: Win2k & Picprog
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> Andy
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> > -----Original Message-----
> > From: bounce-picsig-22138@lists.tapr.org
> > [mailto:bounce-picsig-22138@lists.tapr.org]On Behalf Of Richard Carter
> > Sent: Saturday, 27 January 2001 4:12 a.m.
> > To: TAPR PIC Development Special Interest Group
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> > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andrew Davidson
> > Sent: Friday, January 26, 2001 1:58 AM
> > To: TAPR PIC Development Special Interest Group
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February 2001

Original source file: picsig.0102
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0102

1. [picsig] Announcing the SSMP

From: James Jefferson <jjeffers@deskmedia.com>
Date: Tue, 06 Feb 2001 21:31:05 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-133481-2001.02.06-21.40.09--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Everyone,

I thought I would break the silence of the list and tell everyone about a
little proof-of-concept project I've been playing with for a few months.

I have designed a stand-alone APRS weather and message display box thingy -
dubbed the Super Secret Mystery Project. Those of you who saw it at DCC
will remember a little LCD display that was decoding some packets. Now the
SSMP has:

o MX614 1200 baud modem for transmit and receive
o FR2416 2k-byte non-volatile RAM
o PIC16C73B PIC microcontroller
o 2 x 40 LCD display
o APRS message and weather parsing and display
o ~20 message display buffer

The SSMP is by no means a finished product, project, or kit. I built it to
use as a test bed and as a simple weather station monitor. The code is
incomplete, does not do all that the paper describes, and is has bug (some
may be show-stoppers). I want to release it so people can benefit from
sections of it or go and design something new.

With that said:
What I think will be most useful are the APRS weather parser and the
linked-list buffer. You can find the APRS parser in display.c and the
linked list stuff in ll-byte.c. jimw.c is the main program. For some reason
I have also placed a HEX file for the PIC16C73B that contains a compiled
version. (I'm asking for trouble, I think).

I have not drawn a schematic yet. The #defines at the top of jimw.c should
give you a clue to the hardware configuration. The LCD display is driven
using an EDE702 display driver chip. It simply takes serial input and makes
the proper LCD signals.

The receiving code is based upon what John Hansen, W2FS, presented at the
Digital Communications Conference.
The APRS parser and was written by Clare Jarvis, K0NY, and myself.
The linked-list routines were written for the PC by K0NY and ported to the
PIC environment by me.
Jeff King helped with the button press detection routines.
The rest of the mess is hours of me fighting with the PCM compiler (it has
big time trouble making arrays over 40 bytes - I spent DAYS dealing with that)

All of the code is at:
http://www.jarviscomputer.com/wx/ssmp/

A introductory paper that explains some of the mystery is at:
http://www.jarviscomputer.com/wx/ssmp/ssmp-paper.pdf

I will draw a schematic sometime next week. Feel free to ask me any
questions up until then.

Have fun,

-James Jefferson KB0THN

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] MX614 info.....

From: John Morley <jmorley@endeavour-usa.com>
Date: Tue, 06 Feb 2001 23:21:29 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Message-ID: <LYR6890-133491-2001.02.06-22.35.08--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi!

FYI

A few weeks ago, I asked the group why the TX retiming feature of the MX614 modem chip was not implemented on the PIC-E. At least one reply came from someone who mis-read my post as asking about RX retiming, and indicated that it was impossible due to the asynchronous nature of the task. Subsequently, I discovered that the MX614 will indeed perform RX retiming, but only for byte-wide data. This, of course, will not work for packet AX.25 data which is bit-stream in nature. BTW TX retiming does not have this limitation and significantly improves the TX timing of 1200 baud packet while reducing the software complexity necessary to produce it.

John Morley

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] Re: MX614 info.....

From: James Jefferson <jjeffers@deskmedia.com>
Date: Tue, 06 Feb 2001 22:29:48 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-133492-2001.02.06-22.38.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Sorry for not replying John. You are right - the MX614 for is only useful for TX retimming.

Here is an e-mail I wrote on 26 July 1999:

Hello everyone,

I implemented the TX bit retimmming this evening. It is really easy to do, and should fix any timming problems. This code should fit into John's DCC paper skeleton okay. You will need to set the CLK line to low initally.

If you want to try this on your PIC-E board, then I would suggest using RB6 and RB7 for RDY and CLK.

Have fun and 73's,

-James Jefferson KB0THN
jjeffers@deskmedia.com
http://www.deskmedia.com/~jjeffers/

```
void delay_modem(void)  /* Uses the MX614 data retiming */
{
do { } while (0 != input(MX_RDY)); /* Wait for RDY to go low */
}

void setout(bit i)      /* 1 to leave output the same, 0 to flip */
{
stuff = 0;
if (i == bit_test(port_b,3))            /* pin_b3 */
         {
         output_high(TX_DATA);
         output_high(MX_CLK);
         delay_us(2);
         output_low(MX_CLK);
         } else {
         output_low(TX_DATA);
         output_high(MX_CLK);
         delay_us(2);
         output_low(MX_CLK);
         }
}
```

At 11:21 PM 2/6/01 -0500, you wrote:
>At least one reply

>came from someone who mis-read my post as asking about RX retiming, and
>indicated that it was impossible due to the asynchronous nature of
>the task. Subsequently, I discovered that the MX614 will indeed perform RX
>retiming, but only for byte-wide data. This, of course, will not work for
>packet AX.25 data which is bit-stream in nature. BTW TX retiming does not
>have this limitation and significantly improves the TX timing of 1200 baud
>packet while reducing the software complexity necessary to produce it.
>
>John Morley
>
>
>---
>You are currently subscribed to picsig as: jjeffers@deskmedia.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] Re: Announcing the SSMP

From: Steve Bragg <steve@hamhud.net>
Date: Wed, 07 Feb 2001 09:35:07 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-133580-2001.02.07-09.50.40--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

James Jefferson wrote:
>
> Hello Everyone,
>
> I thought I would break the silence of the list and tell everyone about a
> little proof-of-concept project I've been playing with for a few months.
>
> I have designed a stand-alone APRS weather and message display box thingy -
> dubbed the Super Secret Mystery Project. Those of you who saw it at DCC
> will remember a little LCD display that was decoding some packets. Now the
> SSMP has:
>
> o MX614 1200 baud modem for transmit and receive
> o FR2416 2k-byte non-volatile RAM
> o PIC16C73B PIC microcontroller
> o 2 x 40 LCD display
> o APRS message and weather parsing and display
> o ~20 message display buffer

Sounds a lot like the HamHUD III, a project that's already been approved
by the TAPR board.

73,

Steve Bragg KA9MVA
```
---  __ __ ___   _____  __  _____    _____
   / //_//   | / __ \/  |/  / |  / /   |
  / ,<  / /| |/ /_/ / /|_/ /| | / / /| |
 / /| |/ ___ |\__, / /  / / | |/ / ___ |
/_/ |_/_/  |_/____/_/  /_/  |___/_/  |_|
=========================================================
```
Steve Bragg KA9MVA   ka9mva@qsl.net   ICQ:29816109
HamHUD APRS Mobile Terminal: http://www.hamhud.net
Owasso, Oklahoma, USA
Owasso Amateur Radio Club www.qsl.net/oarc
FINDU, FIND ME WITH APRS! http://map.findu.com/ka9mva-9

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] Re: Announcing the SSMP

From: James Jefferson <jjeffers@deskmedia.com>
Date: Wed, 07 Feb 2001 10:19:16 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-133589-2001.02.07-10.27.54--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Sounds a lot like the HamHUD III, a project that's already been approved
>by the TAPR board.

Gosh, there I go stepping on TAPR's toes again. Sounds like my MX614 group

```
purchase all over again! (wink)

-James Jefferson KB0THN

---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

6. [picsig] Re: Announcing the SSMP

```
From: Steve Bragg <steve@hamhud.net>
Date: Wed, 07 Feb 2001 10:20:54 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-133593-2001.02.07-10.36.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
James Jefferson wrote:
>
> >Sounds a lot like the HamHUD III, a project that's already been approved
> >by the TAPR board.
>
> Gosh, there I go stepping on TAPR's toes again. Sounds like my MX614 group
> purchase all over again! (wink)

That's cool.  What can we (and our projects) learn from each other?  I
certainly don't have the KISS thing figured out yet; and HamHUD has
SmartBeaconing.  Is the SSMP designed to beacon positions, or is it a
display device only?

73,

Steve Bragg

--- __ __ ___   ____  __  ____    _____
   / //_//   | / __ \/  |/  / |  / /   |
  / ,<  / /| |/ /_/ / /|_/ /| | / / /| |
 / /| |/ ___ |\__, / /  / / | |/ / ___ |
/_/ |_/_/  |_/____/_/  /_/  |___/_/  |_|
=====================================================
Steve Bragg KA9MVA    ka9mva@qsl.net   ICQ:29816109
HamHUD APRS Mobile Terminal: http://www.hamhud.net
Owasso, Oklahoma, USA
Owasso Amateur Radio Club www.qsl.net/oarc
FINDU, FIND ME WITH APRS! http://map.findu.com/ka9mva-9

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

7. [picsig] Re: Announcing the SSMP

```
From: Jeff King <jeff@aerodata.net>
Date: Wed, 07 Feb 2001 15:41:29 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: James Jefferson <jjeffers@deskmedia.com>
Message-ID: <LYR6890-133681-2001.02.07-14.57.09--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
James Jefferson wrote:

> >Sounds a lot like the HamHUD III, a project that's already been approved
> >by the TAPR board.

> Gosh, there I go stepping on TAPR's toes again.

Don't worry about it James. Your not, and even if you were, it is
not your problem. Keep up the good work.

-Jeff

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

8. [picsig] Re: Announcing the SSMP

```
From: Steve Bragg <steve@hamhud.net>
Date: Wed, 07 Feb 2001 14:48:30 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-133683-2001.02.07-15.04.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
Jeff King wrote:
>
> James Jefferson wrote:
>
> > >Sounds a lot like the HamHUD III, a project that's already been approved
> > >by the TAPR board.
>
> > Gosh, there I go stepping on TAPR's toes again.
>
> Don't worry about it James. Your not, and even if you were, it is
> not your problem. Keep up the good work.

Yeah, *I* didn't mean to step on toes.  I could see the two projects
benefitting from each other.

73,

Steve KA9MVA
--- __ __ ___   ____  __  ____    _____
   / //_//   | / __ \/  |/  / |  / /   |
  / ,<  / /| |/ /_/ / /|_/ /| | / / /| |
 / /| |/ ___ |\__, / /  / / | |/ / ___ |
/_/ |_/_/  |_/____/_/  /_/  |___/_/  |_|
=====================================================
Steve Bragg KA9MVA    ka9mva@qsl.net   ICQ:29816109
HamHUD APRS Mobile Terminal: http://www.hamhud.net
Owasso, Oklahoma, USA
Owasso Amateur Radio Club www.qsl.net/oarc
FINDU, FIND ME WITH APRS! http://map.findu.com/ka9mva-9

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

9. [picsig] Re: Announcing the SSMP

```
From: Dick Kors <dk@ofkors.com>
Date: Wed, 07 Feb 2001 15:35:53 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-133729-2001.02.07-17.46.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
James,

Nice piece of work. I thought you might be interested in some work that is being
done at Stanford and with Ron Ross.  Check this one out:

http://www.thistle.org/stanford.htm

Dick Kors
km6ep

James Jefferson wrote:

> Hello Everyone,
>
> I thought I would break the silence of the list and tell everyone about a
> little proof-of-concept project I've been playing with for a few months.
>
> I have designed a stand-alone APRS weather and message display box thingy -
> dubbed the Super Secret Mystery Project. Those of you who saw it at DCC
> will remember a little LCD display that was decoding some packets. Now the
> SSMP has:
>
> o MX614 1200 baud modem for transmit and receive
> o FR2416 2k-byte non-volatile RAM
> o PIC16C73B PIC microcontroller
> o 2 x 40 LCD display
> o APRS message and weather parsing and display
> o ~20 message display buffer
>
> The SSMP is by no means a finished product, project, or kit. I built it to
> use as a test bed and as a simple weather station monitor. The code is
> incomplete, does not do all that the paper describes, and is has bug (some
> may be show-stoppers). I want to release it so people can benefit from
> sections of it or go and design something new.
>
> With that said:
> What I think will be most useful are the APRS weather parser and the
> linked-list buffer. You can find the APRS parser in display.c and the
```

> linked list stuff in ll-byte.c. jimw.c is the main program. For some reason
> I have also placed a HEX file for the PIC16C73B that contains a compiled
> version. (I'm asking for trouble, I think).
>
> I have not drawn a schematic yet. The #defines at the top of jimw.c should
> give you a clue to the hardware configuration. The LCD display is driven
> using an EDE702 display driver chip. It simply takes serial input and makes
> the proper LCD signals.
>
> The receiving code is based upon what John Hansen, W2FS, presented at the
> Digital Communications Conference.
> The APRS parser and was written by Clare Jarvis, K0NY, and myself.
> The linked-list routines were written for the PC by K0NY and ported to the
> PIC environment by me.
> Jeff King helped with the button press detection routines.
> The rest of the mess is hours of me fighting with the PCM compiler (it has
> big time trouble making arrays over 40 bytes - I spent DAYS dealing with that)
>
> All of the code is at:
> http://www.jarviscomputer.com/wx/ssmp/
>
> A introductory paper that explains some of the mystery is at:
> http://www.jarviscomputer.com/wx/ssmp/ssmp-paper.pdf
>
> I will draw a schematic sometime next week. Feel free to ask me any
> questions up until then.
>
> Have fun,
>
> -James Jefferson KB0THN
>
> ---
> You are currently subscribed to picsig as: dk@ofkors.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

10. [picsig] RE: The SSMP

From: "Sadowski, Allan" <allan.sadowski@ncshp.org>
Date: Wed, 7 Feb 2001 18:42:59 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-133732-2001.02.07-17.55.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

James

Looking at your latest HH III.... looks great.... but when I go to the Alliance Semi web page... to get more info on the AS7C106 part.... I don't see it anywhere... beyond end of life?

Also... the 17C766 does it come in a windowed part so that it can be erased? Not real clear at the MicroChip web site if this particular part has a windowed version... sure wish it was FLASH... ah well....

Good show... I'll be following this project closely... and may even switch to PIC from the AVR if it looks real

ALOHA
AH6LS

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11. [picsig] RE: The SSMP <LYR7186-133732-2001.02.07-17.55.53--jjeffers#deskmedia.com@lists.tapr.org>

From: James Jefferson <jjeffers@deskmedia.com>
Date: Wed, 07 Feb 2001 17:54:44 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-133736-2001.02.07-18.04.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Actually my SSMP and the HamHUD III are totally unrelated.

The HH3 will be a complete project. It appears to even have a 2 meter

transciever built-in!

The SSMP is simply a LCD that displays APRS weather and messages.

-Jim

Quoted message follows:
 >James
 >
 >   Looking at your latest HH III.... looks great.... but when I go to
 >the Alliance Semi web page... to get more info on the AS7C106 part.... I
 >don't see it anywhere... beyond end of life?
 >
 >   Also... the 17C766 does it come in a windowed part so that it can be
 >erased? Not real clear at the MicroChip web site if this particular part
 >has a windowed version... sure wish it was FLASH... ah well....
 >
 >   Good show... I'll be following this project closely... and may even
 >switch to PIC from the AVR if it looks real
 >
 >   ALOHA
 >   AH6LS

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12. [picsig] SSMP and HamHUD III

From: "Sadowski, Allan" <allan.sadowski@ncshp.org>
Date: Wed, 7 Feb 2001 18:58:52 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-133738-2001.02.07-18.11.44--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

My apologies to Steve and James... I got the two projects mixed up
after looking at the comments....   too many things going on at the same
time !!!!

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

13. [picsig] RE: The SSMP

From: Steve Bragg <steve@hamhud.net>
Date: Wed, 07 Feb 2001 18:02:08 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-133739-2001.02.07-18.18.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

"Sadowski, Allan" wrote:
>
>   James

Well, the SSMP is James's... HamHUD III is mine, so I'll answer...

>   Looking at your latest HH III.... looks great....

Thanks.

> but when I go to
> the Alliance Semi web page... to get more info on the AS7C106 part.... I
> don't see it anywhere... beyond end of life?

Umm, not true. FAI is shipping them in quantity. A part number error
or something?

>   Also... the 17C766 does it come in a windowed part so that it can be
> erased? Not real clear at the MicroChip web site if this particular part
> has a windowed version... sure wish it was FLASH... ah well....

It's windowed all right, but there should be no need to change that.
The HamHUD III contains circuitry to program a loader/monitor into the
PIC, right on the board. The application software (HamHUD) is contained
in the BATTERY-BACKED RAM. It's reloadable at will through the serial
port. No need for flash.

> and may even
> switch to PIC from the AVR

At last! A convert! <grin>

73,

Steve Bragg KA9MVA

--- __ __ ___ _____ __ ____   _____
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  / ,< / /| |/ /_/ / /|_/ /| | / / /| |
 / /| |/ ___ |__, / / / / | |/ / ___ |
/_/ |_/_/ |_/____/_/ /_/ |___/_/ |_|
===
Steve Bragg KA9MVA   ka9mva@qsl.net   ICQ:29816109
HamHUD APRS Mobile Terminal: http://www.hamhud.net
Owasso, Oklahoma, USA
Owasso Amateur Radio Club www.qsl.net/oarc
FINDU, FIND ME WITH APRS! http://map.findu.com/ka9mva-9

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14. [picsig] TAPR Press Release

From: John Ackermann   N8UR <jra@febo.com>
Date: Sat, 10 Feb 2001 20:10:33 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: tapr-bb@lists.tapr.org, aprssig@lists.tapr.org, netsig@lists.tapr.org,
        bbssig@lists.tapr.org, picsig@lists.tapr.org, hfsig@lists.tapr.org,
        tacgps@lists.tapr.org, tapr-org@lists.tapr.org, htaprs@lists.tapr.org
Message-ID: <LYR6890-134369-2001.02.10-19.25.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

FOR IMMEDIATE RELEASE

February 10, 2001
TAPR APPOINTS NEW DIRECTORS, SECRETARY

Steve Stroh, N8GNJ, and Byon Garribrant, N6BG, have been appointed to the TAPR Board of Directors, and Guy Story, KC5GOI, has been appointed the organization's Secretary.

Steve Stroh is a long time member of TAPR. He lives in Woodinville, Washington, a suburb of Seattle, where he is a member of the Puget Sound Amateur Radio TCP/IP Group (also known as WetNET, the Washington Experimenter's TCP/IP Group) and MicroHAMs, the Microsoft Amateur Radio Club. Steve's major interests in Amateur Radio are digital modes and advanced wireless networking. Steve has been the manager of TAPR's "NetSig" special interest group for several years, and has also been active in TAPR's spread spectrum SIG.

Steve was recently named Digital Editor for CQ Amateur Radio Magazine and writes CQ's monthly Digital Wireless column. Professionally, he is a full-time Independent Technology Writer, focusing on Broadband Wireless Internet Access.

Steve will fill the remaining Board term of Greg Jones, WD5IVD, who previously announced his desire to resign from his TAPR offices after many years of service.

Byon Garribrant has been active in packet radio and transmitter hunting since he was licensed in 1990. He served as the Digital Communications Officer for Orange County RACES for 5 years, maintaining the group's packet BBS, and organizing digital communication exercises using packet message-passing software he created.

In 1998, Byon began actively working with TAPR as a member of the PIC-E design team, and published the firmware used in the PIC-E. He has also given presentations at the last three Digital Communication Conferences on PIC programming. Byon has created several PIC-based amateur radio devices, including the GST-1 and GST-2, which allow GPSs to be used with APRS, the TinyTrak, an inexpensive TNC replacement for an APRS tracker, and PicCon, a transmitter controller for T-Hunting. He sells these devices as kits from his home business, Byonics. He lives in Las Vegas, Nevada, with his wife, Lara, KD6AYO, and three children and works as a computer game programmer for Westwood Studios.

Byon will fill the remaining Board term of Barry McLarnon, VE3JF, who served TAPR as a Director and volunteer for many years. TAPR will miss Barry's technical knowledge and true ham spirit.

Guy Story was first licensed in 1994 and has been an active packet radio user since his first day as a ham. He operated a TCP/IP station using JNOS before becoming active in APRS in early 1997, when he also joined TAPR. As a TAPR member, he has been actively involved in the organization's APRS and spread spectrum activities. Guy is also the APRS Chairman and repeater control operator for the Denton County Amateur Radio Association and is an assistant emergency coordinator for Denton County ARES.

Guy lives in Denton, Texas and is an Electronics Technician in the area of EMC/EMI compliance for Interphase Corporation in Dallas.

Guy takes over as Secretary from Bob Hansen, N2GDE, who continues as a Director and as Editor of the Packet Status Register, TAPR's quarterly journal.

About TAPR
TAPR (officially, Tucson Amateur Packet Radio, Inc.) is a non-profit research and development corporation dedicated to advancing amateur radio through digital technology. It focuses on development of hardware and software tools that enable ham radio operators to explore leading edge technologies. Despite its name, TAPR is an international organization with over 2000 members worldwide.

Contact information:
Telephone: (940) 383-0000
Email: tapr@tapr.org
Web: http://www.tapr.org

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

15. [picsig] Programming PIC in Win2k

From: "James A. Martin Jr." <tapr@jmartin.net>
Date: Sun, 11 Feb 2001 01:46:50 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134421-2001.02.11-02.08.54--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Sig,

Has anyone successfully programmed a PIC from Win2k? I've tried several programs (pixie, pix133b) with no luck. I'm wondering if its possible. I would really like a command line programmer like pixie to use with MPLAB.

Thanks,
James M.

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

16. [picsig] RE: Programming PIC in Win2k

From: "Andrew Davidson" <adavidson@xtra.co.nz>
Date: Mon, 12 Feb 2001 09:25:26 +1300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134484-2001.02.11-14.40.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I gave up, and use a dos boot floppy with pixie and the. hex file onit.
Cheers
Andy

> -----Original Message-----
> From: bounce-picsig-22138@lists.tapr.org
> [mailto:bounce-picsig-22138@lists.tapr.org]On Behalf Of James A. Martin
> Jr.
> Sent: Sunday, 11 February 2001 8:47 p.m.
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Programming PIC in Win2k
>
>

> Sig,
>
> Has anyone successfully programmed a PIC from Win2k? I've tried several
> programs (pixie, pix133b) with no luck. I'm wondering if its possible. I
> would really like a command line programmer like pixie to use with MPLAB.
>
> Thanks,
> James M.
>
>
> ---
> You are currently subscribed to picsig as: adavidson@xtra.co.nz
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

17. [picsig] RE: Programming PIC in Win2k

From: "Richard Carter" <rich.carter@windriver.com>
Date: Mon, 12 Feb 2001 09:34:31 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134612-2001.02.12-08.45.13--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've had to use a DOS boot disk, created from a win98 system. I place the
file to be downloaded on the floppy, then hybernate my notebook. When I
turn it back on, it boots off the floppy. I download the image, pop the
disk out, and restart the notebook. The notebook restarts where I left off.

What a pain...

Regards
Rich - KE1EV

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of James A. Martin
Jr.
Sent: Sunday, February 11, 2001 2:47 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Programming PIC in Win2k

Sig,

Has anyone successfully programmed a PIC from Win2k? I've tried several
programs (pixie, pix133b) with no luck. I'm wondering if its possible. I
would really like a command line programmer like pixie to use with MPLAB.

Thanks,
James M.

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---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

18. [picsig] RE: Programming PIC in Win2k

From: "James A. Martin Jr." <tapr@jmartin.net>
Date: Mon, 12 Feb 2001 10:00:43 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134628-2001.02.12-10.22.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks for the replies. I found a program called NTPICProg that works good
in Win2k and supports the Ludi programmer. It is not a command line
programmer like pixie (can't use it directly with MPLAB / UltraEdit), but it
has worked great so far. I should be easier than booting from a floppy ;)

http://updates.tsb.cx/software.htm

Under 16f84 Utilities.

Thanks,
James M.

> -----Original Message-----
> From: bounce-picsig-8571@lists.tapr.org
> [mailto:bounce-picsig-8571@lists.tapr.org]On Behalf Of Richard Carter
> Sent: Monday, February 12, 2001 8:35 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Programming PIC in Win2k
>
>
> I've had to use a DOS boot disk, created from a win98 system. I place the
> file to be downloaded on the floppy, then hybernate my notebook. When I
> turn it back on, it boots off the floppy. I download the image, pop the
> disk out, and restart the notebook. The notebook restarts where
> I left off.
>
> What a pain...
>
> Regards
> Rich - KE1EV
>
> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of James A. Martin
> Jr.
> Sent: Sunday, February 11, 2001 2:47 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Programming PIC in Win2k
>
>
> Sig,
>
> Has anyone successfully programmed a PIC from Win2k? I've tried several
> programs (pixie, pix133b) with no luck. I'm wondering if its possible. I
> would really like a command line programmer like pixie to use with MPLAB.
>
> Thanks,
> James M.
>
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>
>
> ---
> You are currently subscribed to picsig as: tapr@jmartin.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

19. [picsig] RE: Programming PIC in Win2k

From: "Richard Carter" <rich.carter@windriver.com>
Date: Mon, 12 Feb 2001 11:35:45 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134635-2001.02.12-10.47.04--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Great!

Thanks
Rich
-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of James A. Martin
Jr.
Sent: Monday, February 12, 2001 11:01 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] RE: Programming PIC in Win2k

Thanks for the replies. I found a program called NTPICProg that works good
in Win2k and supports the Ludi programmer. It is not a command line
programmer like pixie (can't use it directly with MPLAB / UltraEdit), but it
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http://updates.tsb.cx/software.htm

Under 16f84 Utilities.

Thanks,
James M.

> -----Original Message-----
> From: bounce-picsig-8571@lists.tapr.org
> [mailto:bounce-picsig-8571@lists.tapr.org]On Behalf Of Richard Carter
> Sent: Monday, February 12, 2001 8:35 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Programming PIC in Win2k
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> I left off.
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> What a pain...
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> Regards
> Rich - KE1EV
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> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of James A. Martin
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>
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>
>
>
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20. [picsig] TAPR DCD with MX614 modem

From: "Jay Sissom" <jsissom73@hotmail.com>
Date: Tue, 13 Feb 2001 07:54:43 -0500

To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134776-2001.02.13-07.09.08--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Does anyone know if the TAPR DCD mod will work with MX614 modem based TNC's?
  We can get very inexpensive modems now, but radio's are still pretty
expensive. MFJ's data radio is the cheapest one but it doesn't provide
squelched audio so won't work with cheap modems.

If it will work, are there wiring directions anyplace?

If anyone has any ideas, I would appreciate them.

73
Jay
KA9OKT

_____
Get your FREE download of MSN Explorer at http://explorer.msn.com

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

21. [picsig] PIC-E

From: "Everardus Pouw" <e.pouw@terra.com.br>
Date: Tue, 13 Feb 2001 22:34:32 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134895-2001.02.13-18.47.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi everybody,

i need integrate an adc in a pic-e board. Instead plug in a serial port a
gps i'd like to plug an adc.
Somebody can help me ???

Best Regards,
Everardus Pouw.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

22. [picsig] PIC16F877-20/P's for sale

From: Jeff King <jeff@aerodata.net>
Date: Wed, 14 Feb 2001 03:06:37 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134950-2001.02.14-02.22.58--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have a new unopened tube (10 pieces) of MicroChip 16F877-20/P's
for sale (FAI stock). First $50 gets it. These parts are sold at
DigiKey for $9.50 each. Footprint is 40 pin DIP.

The 16F877 is used in the HamHud II and John Hansen's PIC KISS TNC
project, among others.

Thanks

-Jeff

P.S. Also have some Maxim 3100CPD uart chips. These are the SPI buffered
UARTS well suited to adding a extra serial port to a PIC.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

23. [picsig] CCS PCB/PCM/PCW manuals (free)

From: Jeff King <jeff@aerodata.net>
Date: Wed, 14 Feb 2001 03:39:10 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: John Hansen <john@hansen.net>, James Jefferson <jjeffers@deskmedia.com>
Message-ID: <LYR6890-134951-2001.02.14-02.55.03--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have four extra CCS manuals if anyone on the SIG wants them,
Aug 96, Dec 1997, Nov 98, July 99. One to a person.

Note this does NOT include the software. Just the manual.

E-mail if you are interested. All I will need is just a SASE with
about 6oz of postage on it for each of them.

E-mail if you want one.

-Jeff

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

24. [picsig] Re: CCS PCB/PCM/PCW manuals (free)

From: John Morley <jmorley@endeavour-usa.com>
Date: Wed, 14 Feb 2001 09:02:33 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134968-2001.02.14-08.16.24--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Jeff,

I'd like the July '99 if it's still available!

John KA1JMF

At 03:39 AM 2/14/2001 -0500, you wrote:
>I have four extra CCS manuals if anyone on the SIG wants them,
>Aug 96, Dec 1997, Nov 98, July 99. One to a person.
>
>Note this does NOT include the software. Just the manual.
>
>E-mail if you are interested. All I will need is just a SASE with
>about 6oz of postage on it for each of them.
>
>E-mail if you want one.
>
>-Jeff
>
>---
>You are currently subscribed to picsig as: jmorley@endeavour-usa.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

25. [picsig] Re: PIC-E

From: John Morley <jmorley@endeavour-usa.com>
Date: Wed, 14 Feb 2001 09:08:43 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134970-2001.02.14-08.23.18--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Everardus,

It depends on how handy you are with hardware prototyping and software
writing. It would be fairly easy to add
a serial ADC (such as the MAX1298) to the PIC-E. It only uses two interface
lines, so although you might have to sacrifice
something on the PIC-E (don't have the schematic handy), it should be a
doable thing..... If you really are adverse to adding
any hardware, Micromint (www.micromint.com) has some nifty A/D to serial
modules (specifically, the AnswerMan Jr/Sr.) that
you could attach to the PIC-E serial port, but you'll still have to do some
coding to allow the PIC-E to interpret the A/D data.

John Morley

At 10:34 PM 2/13/2001 -0300, you wrote:
>Hi everybody,
>
>i need integrate an adc in a pic-e board. Instead plug in a serial port a

>gps i'd like to plug an adc.
>Somebody can help me ???
>
>Best Regards,
>Everardus Pouw.
>
>
>---
>You are currently subscribed to picsig as: jmorley@endeavour-usa.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

26. [picsig] RE: CCS PCB/PCM/PCW manuals (free)

From: "Richard Carter" <rich.carter@windriver.com>
Date: Wed, 14 Feb 2001 09:37:59 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134979-2001.02.14-08.49.18--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'd like one. I can send postage. Please let me know how much.

Regards
Rich - KE1EV

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Jeff King
Sent: Wednesday, February 14, 2001 3:39 AM
To: TAPR PIC Development Special Interest Group
Cc: John Hansen; James Jefferson
Subject: [picsig] CCS PCB/PCM/PCW manuals (free)

I have four extra CCS manuals if anyone on the SIG wants them,
Aug 96, Dec 1997, Nov 98, July 99. One to a person.

Note this does NOT include the software. Just the manual.

E-mail if you are interested. All I will need is just a SASE with
about 6oz of postage on it for each of them.

E-mail if you want one.

-Jeff

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27. [picsig] Re: TAPR DCD with MX614 modem

From: John Hansen <john@hansen.net>
Date: Wed, 14 Feb 2001 10:24:16 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134988-2001.02.14-09.35.59--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Shameless plug: The PIC KISS mode TNC that I did for last November's issue
of QST is MX-614-based and has software DCD built into it, so it can run
open squelch.

John W2FS

At 07:54 AM 2/13/01 -0500, you wrote:
>Does anyone know if the TAPR DCD mod will work with MX614 modem based
>TNC's? We can get very inexpensive modems now, but radio's are still
>pretty expensive. MFJ's data radio is the cheapest one but it doesn't
>provide squelched audio so won't work with cheap modems.

```
>
>If it will work, are there wiring directions anyplace?
>
>If anyone has any ideas, I would appreciate them.
>
>73
>Jay
>KA9OKT
>
>_____________________________________________________________
>Get your FREE download of MSN Explorer at http://explorer.msn.com
>
>
>---
>You are currently subscribed to picsig as: john@hansen.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org


---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

28. [picsig] Re: PIC16F877-20/P's for sale

```
From: Steve Bragg <steve@hamhud.net>
Date: Wed, 14 Feb 2001 09:29:13 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134991-2001.02.14-09.44.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
Jeff King wrote:

> The 16F877 is used in the HamHud II <snip>

Close, but no cigar.  The PIC16F876 is the one HamHUD II uses.

73,

Steve
--- __ __ ___   ____  __  ____    _____
   / //_//   | / __ \/  |/  / |  / /   |
  / ,<  / /| |/ /_/ / /|_/ /| | / / /| |
 / /| |/ ___ |\__, / /  / / | |/ / ___ |
/_/ |_/_/  |_/____/_/  /_/  |___/_/  |_|
=====================================================
Steve Bragg KA9MVA    ka9mva@hamhud.net   ICQ:29816109
HamHUD APRS Mobile Terminal: http://www.hamhud.net
Owasso, Oklahoma, USA
Owasso Amateur Radio Club www.qsl.net/oarc
FINDU, FIND ME WITH APRS! http://map.findu.com/ka9mva-9


---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

29. [picsig] Re: Chiips 68Hc705c8cs

```
From: Bob Bruninga <bruninga@usna.edu>
Date: Wed, 14 Feb 2001 11:27:49 -0500 (EST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135011-2001.02.14-10.42.19--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
I posted this some time ago, and want to clear my desk...

> I have a bunch (18) of EEpromable microprocessors labeled 68HC705c8cs
> and looked up the price as $16 in quantities of 10 or more.

I have no need for these, so if anyone wants them for $7 each lemme know.
or $99 for all 18..  (all new)...

bob bruninga
115 old farm court
Glen Burnie, Md 21060



---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

30. [picsig] RE: PIC-E

From: "Richard Carter" <rich.carter@windriver.com>
Date: Wed, 14 Feb 2001 09:38:00 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134978-2001.02.14-08.48.40--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

What is an adc, analog/digital converter?

Rich - KE1EV

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Everardus Pouw
Sent: Tuesday, February 13, 2001 8:35 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] PIC-E

Hi everybody,

i need integrate an adc in a pic-e board. Instead plug in a serial port a
gps i'd like to plug an adc.
Somebody can help me ???

Best Regards,
Everardus Pouw.

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31. [picsig] Re: TAPR DCD with MX614 modem

From: "James Jefferson" <jjeffers@deskmedia.com>
Date: Wed, 14 Feb 2001 13:57:48 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135067-2001.02.14-14.13.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR's DCD kit (which I believe has been sold out for the past few years) needs a clock signal to work.
If you can generate the clock
in the software and feed it into the hardware then it will work.

I implemented the TAPR kit in a PIC. The edges are a little rough, but it shouldn't take much effort to
make it work. Try looking at:
http://www.deskmedia.com/~jjeffers/packet/pic/

-James Jefferson

> Does anyone know if the TAPR DCD mod will work with MX614 modem based TNC's?
>   We can get very inexpensive modems now, but radio's are still pretty
> expensive. MFJ's data radio is the cheapest one but it doesn't provide
> squelched audio so won't work with cheap modems.
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> If it will work, are there wiring directions anyplace?
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> If anyone has any ideas, I would appreciate them.
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> 73
> Jay
> KA9OKT
>
> _____
> Get your FREE download of MSN Explorer at http://explorer.msn.com
>
>
> ---
> You are currently subscribed to picsig as: jjeffers@deskmedia.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

32. [picsig] RE: PIC-E

From: "Everardus Pouw" <e.pouw@terra.com.br>
Date: Wed, 14 Feb 2001 18:05:48 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135068-2001.02.14-14.20.37--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

yes, it is an analog to digital converter.

-----Mensagem Original-----
De: Doug McKinney <buoy@scruznet.com>
Para: TAPR PIC Development Special Interest Group <picsig@lists.tapr.org>
Enviada em: Wednesday, February 14, 2001 1:54 PM
Assunto: [picsig] RE: PIC-E

> yeap
>
> Doug KC3RL
> ----- Original Message -----
> From: "Richard Carter" <rich.carter@windriver.com>
> To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
> Sent: Wednesday, February 14, 2001 6:38 AM
> Subject: [picsig] RE: PIC-E
>
>
> > What is an adc, analog/digital converter?
> >
> > Rich - KE1EV
> >
> > -----Original Message-----
> > From: bounce-picsig-21297@lists.tapr.org
> > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Everardus Pouw
> > Sent: Tuesday, February 13, 2001 8:35 PM
> > To: TAPR PIC Development Special Interest Group
> > Subject: [picsig] PIC-E
> >
> >
> > Hi everybody,
> >
> > i need integrate an adc in a pic-e board. Instead plug in a serial port
a
> > gps i'd like to plug an adc.
> > Somebody can help me ???
> >
> > Best Regards,
> > Everardus Pouw.
> >
> >
> > ---
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> >
> > ---
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> >
> >
>
>
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33. [picsig] Re: TAPR DCD with MX614 modem

From: "Richard Carter" <rich.carter@windriver.com>
Date: Wed, 14 Feb 2001 15:25:09 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135072-2001.02.14-14.35.47--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Would someone please give me a quick explaination about this? I thought the
614 had a DCD sense line from it. Is extra hardware or software needed?

Rich - KE1EV

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of James Jefferson
Sent: Wednesday, February 14, 2001 2:58 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: TAPR DCD with MX614 modem

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http://www.deskmedia.com/~jjeffers/packet/pic/

-James Jefferson

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> We can get very inexpensive modems now, but radio's are still pretty
> expensive. MFJ's data radio is the cheapest one but it doesn't provide
> squelched audio so won't work with cheap modems.
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> 73
> Jay
> KA9OKT
>
> _____
> Get your FREE download of MSN Explorer at http://explorer.msn.com
>
>
> ---
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> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

34. [picsig] Re: TAPR DCD with MX614 modem

From: John Hansen <john@hansen.net>
Date: Wed, 14 Feb 2001 16:00:01 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135078-2001.02.14-15.13.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 02:54 PM 2/14/01 -0600, you wrote:
>Ricahrd, the MX614 uses energy sense not true DCD.

And so, in order for it to avoid sensing energy when there's no one
transmitting, you would have to have a squelch.

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35. [picsig] Re: TAPR DCD with MX614 modem

From: Steve Dimse <sdimse@telocity.com>
Date: Wed, 14 Feb 2001 16:01:00 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135079-2001.02.14-15.16.45--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 2/14/01 3:54 PM Guy J. Story (kc5goi@pacecar.infospeedway.net) wrote:

>Ricahrd, the MX614 uses energy sense not true DCD.
>
Which, of course, is what you want when using it in a Mic-E type
situation, where you need to hold off transmission while a voice
conversation is underway!

Steve K4HG

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36. [picsig] RE: PIC-E

From: "Doug McKinney" <buoy@scruznet.com>
Date: Wed, 14 Feb 2001 08:54:33 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135018-2001.02.14-11.13.09--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

yeap

Doug KC3RL
----- Original Message -----
From: "Richard Carter" <rich.carter@windriver.com>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Wednesday, February 14, 2001 6:38 AM
Subject: [picsig] RE: PIC-E

> What is an adc, analog/digital converter?
>
> Rich - KE1EV
>
> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Everardus Pouw
> Sent: Tuesday, February 13, 2001 8:35 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] PIC-E
>
>
> Hi everybody,
>
> i need integrate an adc in a pic-e board. Instead plug in a serial port a
> gps i'd like to plug an adc.
> Somebody can help me ???
>
> Best Regards,
> Everardus Pouw.
>
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>
>
> ---
> You are currently subscribed to picsig as: buoy@scruznet.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

37. [picsig] RE: CCS PCB/PCM/PCW manuals (free)

From: "James A. Martin Jr." <james@jmartin.net>
Date: Wed, 14 Feb 2001 09:37:14 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134994-2001.02.14-09.59.35--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Jeff,

I'm interested in both the PICS and a manual. Are the PICs gone? How about
the manual.

Do you accept Paypal?

Thanks,
JAmes M.

> -----Original Message-----
> From: bounce-picsig-16220@lists.tapr.org
> [mailto:bounce-picsig-16220@lists.tapr.org]On Behalf Of Jeff King
> Sent: Wednesday, February 14, 2001 2:39 AM
> To: TAPR PIC Development Special Interest Group
> Cc: John Hansen; James Jefferson
> Subject: [picsig] CCS PCB/PCM/PCW manuals (free)
>
>
> I have four extra CCS manuals if anyone on the SIG wants them,
> Aug 96, Dec 1997, Nov 98, July 99. One to a person.
>
> Note this does NOT include the software. Just the manual.
>
> E-mail if you are interested. All I will need is just a SASE with
> about 6oz of postage on it for each of them.
>
> E-mail if you want one.
>
> -Jeff
>
> ---
> You are currently subscribed to picsig as: tapr2@jmartin.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
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38. [picsig] RE: TAPR DCD with MX614 modem

From: tarnerich@in-situ.com (Tony Arnerich)
Date: Wed, 14 Feb 2001 09:22:56 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135004-2001.02.14-10.36.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

"Jay Sissom" <jsissom73@hotmail.com>

>Does anyone know if the TAPR DCD mod will work with MX614 modem based TNC's?

>...MFJ's data radio is the cheapest one but it doesn't provide
>squelched audio so won't work with cheap modems.
>...If anyone has any ideas, I would appreciate them.

Take a look at Paccomm's add-on DCD boards. They have a few versions, one of
which is completely generic - it's up to you to figure out which traces to
cut and where to tack solder the add-on's leads. Expect to pay something like
$25. I'm using the version that's designed for the 3105 modem chip inside my
KAM, and it works great for me.

73,
Tony KD7TA

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

39. [picsig] RE: CCS PCB/PCM/PCW manuals (free)

From: Jeff King <jeff@aerodata.net>
Date: Wed, 14 Feb 2001 17:03:33 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135087-2001.02.14-16.25.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Richard Carter wrote:
>
> I'd like one. I can send postage. Please let me know how much.

Send a 7"x9" (or larger) SASE for 8oz to me, and I can send one to
you. Media Mail postage is $1.30. Check http://www.usps.gov for other
options (and mark the shipping method on the SASE). Media mail works
good however.

So far two of them are spoken for. If anyone else wants one, please e-mail
me off SIG before you send a SASE. The PIC's are sold.

Regards,

Jeff King wb8wka
22816 Maple Ave
Farmington, MI 48336

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

40. [picsig] Re: TAPR DCD with MX614 modem

From: "Steven R. Bible" <n7hpr@amsat.org>
Date: Wed, 14 Feb 2001 22:13:03 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135138-2001.02.14-23.28.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Boy, has this thread spread its branches. Let me try and summarize a few
comments and make an input that hopefully helps point people in the right
direction.

Jay KA9OKT first asked:

> Does anyone know if the TAPR DCD mod will work with MX614 modem based
TNC's?
> We can get very inexpensive modems now, but radio's are still pretty
> expensive. MFJ's data radio is the cheapest one but it doesn't provide
> squelched audio so won't work with cheap modems.
>
> If it will work, are there wiring directions anyplace?
>
> If anyone has any ideas, I would appreciate them.

James Jefferson said:

> TAPR's DCD kit (which I believe has been sold out for the past
> few years) needs a clock signal to work. If you can generate the clock
> in the software and feed it into the hardware then it will work.

The kits are still available. However, as James mentioned, the TAPR DCD mod
kits assume installation in a TNC-2 thus the requirment to have a clock
signal.

It is possible to construct a "hardware" DCD using the XR2211 chip without a
clock. Take a look at the XR2211 data sheet and there's a configuration of
the 2211 that can be used for DCD detection.

You can also implement a DCD in software such as James has:

> I implemented the TAPR kit in a PIC. The edges are a little
> rough, but it shouldn't take much effort to make it work. Try
> looking at: http://www.deskmedia.com/~jjeffers/packet/pic/

or John:

> Shameless plug: The PIC KISS mode TNC that I did for last November's
> issue of QST is MX-614-based and has software DCD built into it, so it
> can run open squelch.

Take a look at the TAPR DCD mods web page at

http://www.tapr.org/tapr/html/dcd.html

You can download the assembly manual. Though I did just check it and see
that the schematic diagrams are not in it. Must be from the old days of
photo ready manuals :-).

The kits are an extension of Eric Gustafson's paper "Can We Continue to
Ignore Level One?" in the 7th CNC. I would recommend reading Eric's paper.
Here's the abstract from:

>From http://www.tapr.org/tapr/html/Fcnc07.html

ARRL 7th Computer Networking Conference 1988

Can We Continue to Ignore Level One?
by Eric S. Gustafson, N7CL

Abstract: For some reason which I cannot fathom, there has been a great
reluctance to specify or even to provide guidelines for the various level 1
issues in the amateur packet radio system. This reluctance traces back all
the way to the very early days of packet radio development. I find this
situation very strange indeed since if level 1 isn't uorking. all the other
levels of the protocol uhich everyone eeems eager to specify doun to the
last bit position are all irrelevant.

In this paper I will choose one of the most consistently botched and yet
most easily corrected level 1 parameters, the modem's data carrier detector.
I will show how the performance of our present packet systems can be
improved by careful consideration of even just this simple level 1 issue.

Tony, KD7TA, mentioned the PacComm DCD mod kits. They are realtively the
same thing as the TAPR DCD kits. There are two DCD mod kits sold by TAPR.
One of which works with the TCM3105 modem chip. The mod taps off a clock
signal that comes from the TCM3105.

Guy Story, KC5GOI, mentioned that the MX-614 has energy detect, which is
true. It is not the same as DCD. Energy detect still requires a squelched
signal. It'll detect energy when the squelch opens (pretty simplistic
actually).

Jay, you may want to order the proceedings either on paper or CDROM from
TAPR. Many of the early packet work has been documented in the CNC (and now
call DCC) proceedings.

Hope this helps.

 - Steve, N7HPR
   n7hpr@tapr.org

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

41. [picsig] Re: TAPR DCD with MX614 modem

From: "Guy J. Story" <kc5goi@pacecar.infospeedway.net>
Date: Wed, 14 Feb 2001 14:54:14 -0600 (EST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135077-2001.02.14-15.08.40--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ricahrd, the MX614 uses energy sense not true DCD.

73 from
Guy Story, KC5GOI
Silver Dome MHP # 79
Denton Texas, 76208
www.kc5goi.net
kc5goi@kc5goi.net

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

42. [picsig] Re: TAPR DCD with MX614 modem

From: "Richard Carter" <rich.carter@windriver.com>
Date: Wed, 14 Feb 2001 16:17:42 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135082-2001.02.14-15.28.45--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Please excuse my ignorance. I'm designing the software for an APRS TNC
using the 614. Do you have a link to more detailed information regarding
this problem?

Regards
Rich

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Guy J. Story
Sent: Wednesday, February 14, 2001 3:54 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: TAPR DCD with MX614 modem

Ricahrd, the MX614 uses energy sense not true DCD.

73 from
Guy Story, KC5GOI
Silver Dome MHP # 79
Denton Texas, 76208
www.kc5goi.net
kc5goi@kc5goi.net

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---
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43. [picsig] ICEPIC PICemulator with DB77 pod (FS)

From: Jeff King <jeff@aerodata.net>
Date: Thu, 15 Feb 2001 00:38:39 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135141-2001.02.14-23.55.15--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The PIC garage sale continues.... ;-)

I have a ICEPIC PIC emulator with DB77 pod I am going to
be putting on E-Bay, but wanted to give this group first
shot. I'm hoping to get at least $400 for the ICEPIC and
the POD (list is>$800). Here is more info and pricing on
it:

http://www.okwelectronics.com/products/pic/emulators.htm
http://www.rfsolutions.co.uk/products/pic/emulators.htm

Please contact me offlist if interested. All offers considered.

-Jeff

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

44. [picsig] MX614 DCD

From: "Marcelo Puhl" <mark@plug-in.com.br>
Date: Thu, 15 Feb 2001 11:37:27 -2
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Message-ID: <LYR6890-135202-2001.02.15-07.51.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

I have noted that the MX614 IC has random pulses at the RDY signal with
the input audio disconnected. Even grounding the input didn't changed this.

Is this common ?   Any solutions ?

Thanks.

>
> Subject: Re: TAPR DCD with MX614 modem
> From: John Hansen <john@hansen.net>
> Date: Wed, 14 Feb 2001 16:00:01 -0500
> X-Message-Number: 17
>
> At 02:54 PM 2/14/01 -0600, you wrote:
> >Ricahrd, the MX614 uses energy sense not true DCD.
>
> And so, in order for it to avoid sensing energy when there's no one
> transmitting, you would have to have a squelch.
>

Marcelo Puhl
Mensa member #052198
http://www.mensa.org
mark@plug-in.com.br

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

45. [picsig] Re: MX614 DCD

From: John Hansen <john@hansen.net>
Date: Thu, 15 Feb 2001 10:02:45 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135229-2001.02.15-09.18.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 11:37 AM 2/15/01 +00-02, you wrote:

>Hi,
>
>I have noted that the MX614 IC has random pulses at the RDY signal with
>the input audio disconnected. Even grounding the input didn't changed this.
>
>Is this common ?   Any solutions ?
>
>Thanks.

The RDY pin is not the energy detection pin. The DET pin is. I'm not
exactly sure what the RDY pin does. I do know, however, that the 614 sends
random pulses out its data receive pin when no signal is being detected. I
discussed this with an MX-Com engineer and was told that it was normal. So
your description of the behavior of the RDY pin doesn't surprise me.

John W2FS

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

46. [picsig] Re: MX614 DCD

From: "Marcelo Puhl" <mark@plug-in.com.br>
Date: Fri, 16 Feb 2001 14:29:36 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135488-2001.02.16-10.44.19--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
> The RDY pin is not the energy detection pin. The DET pin is. I'm not
> exactly sure what the RDY pin does. I do know, however, that the 614 sends
> random pulses out its data receive pin when no signal is being detected. I

> discussed this with an MX-Com engineer and was told that it was normal. So your
> description of the behavior of the RDY pin doesn't surprise me.
>
> John W2FS
>

Thanks John for the information. I appreciated it.

The RDY pin signals when the internal UART has a byte ready for reading
if the CLK pin is LOW.

So the random data received triggers the RDY pin, even if the audio
input is tied to ground !

Thanks again.

Marcelo Puhl
Mensa member #052198
http://www.mensa.org
mark@plug-in.com.br

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

47. [picsig] FSK rx...

From: "Mike Berg" <mikeberg@midstate.tds.net>
Date: Sat, 17 Feb 2001 07:53:40 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-135655-2001.02.17-08.08.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Tho it sorta seems like a step backwards, I think my
next packet rx unit will use the EXAR 2211.
I had a chance to experiment with it in another FSK
project about a year ago and was inpressed by both
it's flexibility and performance. With the right RC combination
on the lock detect pin provides pretty good carrier detect response
too.
73 Mike N0QBH

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

48. [picsig] Need LudiPipo programmer for 'F628

From: "Richard Carter" <rich.carter@windriver.com>
Date: Tue, 20 Feb 2001 10:10:56 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-136267-2001.02.20-09.53.37--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I retrofit my pic-e with a 16F628 PIC. Does anyone have a LudiPipo
programmer that will work with this device? If not, does anyone have source
for a LudiPipo programmer that they are willing to share?

Richard Carter
Wind River Systems
10 Tara Blvd. Suite 330
Nashua NH 03062
603-897-2071

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

49. [picsig] RE: Need LudiPipo programmer for 'F628

From: Andreas Junge <Andreas@OpenGrid.com>
Date: Tue, 20 Feb 2001 16:15:42 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-136411-2001.02.20-18.25.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Richard,

I have ICProg 1.03. I can mail it to you ....

Andreas, N6NU

> -----Original Message-----
> From: Richard Carter [mailto:rich.carter@windriver.com]
> Sent: Tuesday, February 20, 2001 7:11 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Need LudiPipo programmer for 'F628
>
>
> I retrofit my pic-e with a 16F628 PIC. Does anyone have a LudiPipo
> programmer that will work with this device? If not, does
> anyone have source
> for a LudiPipo programmer that they are willing to share?
>
> Richard Carter
> Wind River Systems
> 10 Tara Blvd. Suite 330
> Nashua NH 03062
> 603-897-2071
>
>
> ---
> You are currently subscribed to picsig as: andreas@opengrid.com
> To unsubscribe send a blank email to
> leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

50. [picsig] Change PIC16f84 to 84A in a PIC-E

From: "Everardus Duarte Pouw" <e.pouw@terra.com.br>
Date: Tue, 20 Feb 2001 19:10:29
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-136431-2001.02.20-19.25.13--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Is it possible change PIC16f84 to 84A in a PIC-E ???
Here in Brazil i can't find PIC16f84, i find only PIC16f84A.

Thanks,
Everardus Pouw.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

51. [picsig] Re: Change PIC16f84 to 84A in a PIC-E

From: John Hansen <john@hansen.net>
Date: Tue, 20 Feb 2001 20:33:09 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-136435-2001.02.20-19.44.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:10 PM 2/20/01 +0000, you wrote:
>Is it possible change PIC16f84 to 84A in a PIC-E ???
>Here in Brazil i can't find PIC16f84, i find only PIC16f84A.
>
>Thanks,
>Everardus Pouw.

Absolutely no problem. Even when the F84's are available, the 84A's are
cheaper.

>---
>You are currently subscribed to picsig as: john@hansen.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org

To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

52. [picsig] Re: Change PIC16f84 to 84A in a PIC-E

From: "Antonio Sergio Sena" <aserginho@hotmail.com>
Date: Wed, 21 Feb 2001 10:27:53 -0000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-136536-2001.02.21-04.42.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Is it possible change PIC16f84 to 84A in a PIC-E ???
>Here in Brazil i can't find PIC16f84, i find only PIC16f84A.
>
>Thanks,
>Everardus Pouw.

Absolutely.
The main difference is in the internal silicon. The A type has been
developed with a new process, that uses thiner wafers.

Please someone correct me if i am wrong!

****
Antonio Sergio Sena
www.qsl.net/ct2gpw
Heriot-Watt University - Edinburgh
BEng Electrical & Electronic Engineering

_____
Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

53. [picsig] APRS Speed

From: Mark Cheavens <mcheavens@usa.net>
Date: Thu, 22 Feb 2001 14:27:18 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-136893-2001.02.22-14.44.18--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

After using APRS Speed for a few month's I have come up with a few idea's
to further the improvement of what I believe to be the best code for the
Pic-E. (I'm running the code in 4 Pic-E's). I pose to the group to see if
there are other features that someone else can think of in addition to mine
before I try to tackle the mods (or ask for other people's help).

1. Add adaptive enroute/standby status.
        Example: if stationary for x minutes change status from enroute to standby.
2. Add adaptive beacon (beacon text) so that beacon would only be sent out
every x minutes at max instead of every x transmissions. (this to shorten
the packet length and free up band width and still be able to send out
beacon message). Currently I have mine set to beacon every 5 transmissions.
That means that when stationary it only gets sent out every 1hr15min but
while driving at 80mph it get's sent out every 50secs. My proposal would be
to able to set it to every x minutes when enroute and every transmission or
so when stationary.

Currently I use Mode 1 for enroute and Mode 2 for stationary to solve the
above two issues. But, I would rather use the two modes to be able to
change paths etc and not "waste" them on just the status and beacon rate!

3. Add timeslotting using GPS time (this will maximize available number of
stations in congested markets).
This will be the hardest of the three enhancements to implement.

Other ideas or features.....??????

Mark Cheavens
KC5EVE
http://map.findu.com/kc5eve-9

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

54. [picsig] APRSpeed2

From: Mark Cheavens <mcheavens@usa.net>
Date: Fri, 23 Feb 2001 11:21:51 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-137064-2001.02.23-11.38.19--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello all,
I have posted a new file called APRSpeed2.zip to the picsig ftp directory
at tapr.org. It is currently in the upload folder. It is mainly commenting
additions to the excellent original aprspeed program. I have also added the
compiler (and a batch file) as well as a programmer (command line with
batch file) that will work in most environments. (NOT NT). I also fixed the
occasional PTT lock up on power up when used without a microphone attached.
IF you use a microphone there are two lines that need to be un-commented.
(see the readme file!)

The only thing that I did not fix as I didn't want to mess up anyones
"other" projects was a correction that fixes the p16f84.inc file so that
when the program compiles is correctly sets the pwrite switch. If you would
edit the above file with the changes below it will set all the switches
properly!

```
_PWRTE_ON                    EQU     H'3FFA'
; PWRTE_ON WAS 3FF7 ORIGINALLY - SET TO 3FFA
```

Have fun!

Mark Cheavens
KC5EVE

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55. [picsig] Re: Change PIC16f84 to 84A in a PIC-E

From: Neil Thomas <meltek_n@global.co.za>
Date: Sun, 25 Feb 2001 11:07:11 +0200
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-137334-2001.02.25-07.14.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

According to info from our local Microchip support the alphabetical
suffix denotes a die shrink. i.e. smaller silicon wafer with the same
capability. A bonus with this is that a PIC 16F84A -04P can run up to
20 MHz clock speed! One of our PIC group members tried it in a TiniTrak
and it works 100% Also note that the suffix may also be a B,C etc. and
it applies to all the PIC processors.

Greetings,

Neil Thomas ZR2NT

Antonio Sergio Sena wrote:
>
> >Is it possible change PIC16f84 to 84A in a PIC-E ???
> >Here in Brazil i can't find PIC16f84, i find only PIC16f84A.
> >
> >Thanks,
> >Everardus Pouw.
>
> Absolutely.
> The main difference is in the internal silicon. The A type has been
> developed with a new process, that uses thiner wafers.
>
> Please someone correct me if i am wrong!
>
> **
> Antonio Sergio Sena
> www.qsl.net/ct2gpw
> Heriot-Watt University - Edinburgh
> BEng Electrical & Electronic Engineering
>
> _____
> Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com.
>
> ---
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---
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56. [picsig] Re: Change PIC16f84 to 84A in a PIC-E

From: Jeff King <jeff@aerodata.net>
Date: Sun, 25 Feb 2001 18:07:35 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-137415-2001.02.25-17.23.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Neil Thomas wrote:

> A bonus with this is that a PIC 16F84A -04P can run up to
> 20 MHz clock speed! One of our PIC group members tried it in a TiniTrak
> and it works 100%

Just realize that if you do this in a commerical product, and it doesn't work,
you have no recourse with Microchip. They hold you to the specs, even the
fine print.

Tha much being said, it is a great hobbist use of the part. I've also heard
people have gotten the 16C54 series up to 50mhz by using an external osc.

As a sidenote to the need for speed, CCS recently released their C compiler for
the SX series of chips. $50 add on for PCW or $199 standalone.

-Jeff

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57. [picsig] Programing the PIC-E

From: "Lloyd DeVaughns" <Ldevaughns@aol.com>
Date: Mon, 26 Feb 2001 17:0:24
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-137586-2001.02.26-17.15.22--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am having trouble programing the pic-e. I have tried to us the Windows
program came on a disk with the PIC-E (PicProg), but it says check comm
port and program. The unit checks out ok as per the voltage check that is
done when it is completed.

The DOS program (Pix) that comes on the same disk seems to work, but I
cannot find any docs that explain exactly how to program it. If there are
docs, how do I access them or how do I find out whats wrong with the
windows program.

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April 2001

Original source file: picsig.0104
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0104

1. [picsig] sorry for test

From: "ToMCaT Computer Services - SV2CLJ" <tomcat@hyper.gr>
Date: Tue, 3 Apr 2001 21:08:56 +0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-4672-2001.04.03-13.25.38--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

[Empty message body]

2. [picsig] hello om's

From: "ToMCaT Computer Services - SV2CLJ" <tomcat@hyper.gr>
Date: Tue, 3 Apr 2001 21:15:18 +0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-4677-2001.04.03-13.32.02--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

```
i looking for pic-16f84-10 in my country
but i cant find any piece!
the local distributor says that microchip stops this part
i can find only at 4 mhz and the new one 16f84a-20
does the a-20 works with pic-e?

thanks in advance

ps:also does the pic progammer soft run in windows-me?

de thomas sv2clj

http://www.qsl.net/sv2clj
```

3. [picsig] Re: hello om's

From: John Hansen <john@hansen.net>
Date: Tue, 03 Apr 2001 17:45:54 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-4708-2001.04.03-17.00.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

```
At 09:15 PM 4/3/01 +0300, you wrote:
>i looking for pic-16f84-10 in my country
>but i cant find any piece!
>the local distributor says that microchip stops this part
>i can find only at 4 mhz and the new one 16f84a-20
>does the a-20 works with pic-e?
>

The 16F84A-20 will work with no problem.

John W2FS


---
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```

4. [picsig] Re: hello om's

From: "James E. Gutshall" <jeg@cc.usu.edu>
Date: Tue, 3 Apr 2001 23:46:05 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-4782-2001.04.03-00.59.11--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

```
The 20 mhz A version should run just fine.....I dont know the answer about Windows ME
    -----Original Message-----
    From: ToMCaT Computer Services - SV2CLJ <tomcat@hyper.gr>
    To: TAPR PIC Development Special Interest Group <picsig@lists.tapr.org>
    Date: Tuesday, April 03, 2001 12:16 PM
    Subject: [picsig] hello om's


    i looking for pic-16f84-10 in my country
    but i cant find any piece!
    the local distributor says that microchip stops this part
```

i can find only at 4 mhz and the new one 16f84a-20
does the a-20 works with pic-e?

thanks in advance

ps:also does the pic progammer soft run in windows-me?

de thomas sv2clj

http://www.qsl.net/sv2clj

5. [picsig] Re: hello om's

From: Neil Thomas <meltek_n@global.co.za>
Date: Wed, 04 Apr 2001 12:15:25 +0200
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-4813-2001.04.04-05.34.32--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi James,

The -20 after the PIC number designates the max. clock frequency. So
if you need a 16F84-10 the 16F84A-20 will do the job. Just beware not
to exceed a supply voltage of 5.2V. (although the PIC handbook show a
max. of 6V) This is because the alphabetical letter after the F84
denotes a die shrink. i.e. smaller silicon etc.

Regards,

Neil Thomas ZR2NT

"James E. Gutshall" wrote:

> The 20 mhz A version should run just fine.....I dont know the answer
> about Windows ME
>
>   -----Original Message-----
>   From: ToMCaT Computer Services - SV2CLJ <tomcat@hyper.gr>
>   To: TAPR PIC Development Special Interest Group
>   <picsig@lists.tapr.org>
>   Date: Tuesday, April 03, 2001 12:16 PM
>   Subject: [picsig] hello om's
>   i looking for pic-16f84-10 in my countrybut i cant find any
>   piece!the local distributor says that microchip stops this
>   parti can find only at 4 mhz and the new one 16f84a-20does
>   the a-20 works with pic-e? thanks in advance ps:also does
>   the pic progammer soft run in windows-me? de thomas
>   sv2clj http://www.qsl.net/sv2clj
>

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6. [picsig] PACK*BASH at the 2001 Dayton Hamvention

From: John Ackermann N8UR <jra@febo.com>
Date: Mon, 23 Apr 2001 19:11:32 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-8762-2001.04.23-18.29.30--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes, there will be a PACK*BASH this year! Things were a bit uncertain for
a while as we just learned that our traditional site would not be available
this year. But we've found a very good alternative, and we invite you to
attend the 2001 PACK*BASH.

If you'd like to attend, please contact the TAPR office as described below.

What?
        An event for the digitally-inclined ham, featuring:
        * Buffet dinner
        * Keynote Address (Speaker to be named)
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, May 18, 2001
        Doors open at 7:00 pm; dinner served at 7:30 pm

Speaker and meetings after dinner

Where?
*** NEW LOCATION ***
The NCR "Sugarcamp" facility that we've used in the past is no
longer
available. Instead, we'll be at Kohler's Banquet Center, 4548
Presidential Way, Kettering (39 40.75N, 84 08.43W), just south of
East David Road between Far Hills Ave. and Wilmingon Pike.
Maps available on the TAPR web site (www.tapr.org) or at the
TAPR booth.

How?
Dinner requires advance registration and payment through TAPR.
Tickets will be available at the TAPR booth on Friday, though
we strongly encourage registration <before> Hamvention. The cost
is $25.00 per person, tax and tip included.

All amateurs are welcome to attend, enjoy the speaker, and
particpate in the meetings, although only those purchasing a dinner
can eat.

To register, contact:
PACK*BASH
c/o TAPR
8987-309 E. Tanque Verde Road #337
Tucson, AZ 85749-9399

Phone: (940) 383-0000
Fax: (940) 566-2544
Internet: tapr@tapr.org

Visa/Mastercard Accepted

Who?
PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet Radio,
the national leader in digital communication -- and the Miami
Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html, or send email to tapr@tapr.org.

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] Dayton Hamfest: APRS at the TAPR Digital Forum

From: Steve Dimse <k4hg@tapr.org>
Date: Thu, 26 Apr 2001 10:26:28 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-9311-2001.04.26-09.44.09--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Once again I have been handed the utterly impossible task of covering all
of APRS in 45 minutes within the TAPR Digital Forum on Friday. Without
announcement I have already received four requests for time. In previous
years, I tried to do a "What's New" sort of presentation myself, but this
year I will let people speak for themselves...here are the ground rules:

1. Anyone that wants to talk should email me directly (k4hg@tapr.org)
with a request, giving presenter's name, callsign, and topic. The
deadline for requests will be 0000z on May 5th. NO EXCEPTIONS!

2. Given that the requests already total more than the allocated 45
minutes, time will be split evenly among all who request. If any
presentations run short, there will be a general Q&A period afterwards.
NO EXCEPTIONS!

3. Given the problems that usually occur when trying to connect laptops
to the projector at presentations, no computers will be allowed. If you
have something you want to show off, create a handout to be passed out
prior to the presentation. NO EXCEPTIONS!

4. I will be very strict about time, I will notify the speakers in
advance of the time per presentation. Time will start from when you are

announced, not when you get to the front and start talking, so get there early and sit in front if you want to maximize your time. I suggest you practice to get it all in within your allocated time. NO EXCEPTIONS!

5. No yielding of allocated time (I.e. don't bother getting 5 of your buddies to request time so you can talk longer). NO EXCEPTIONS!

6. If you ask for time, and then can't make it, please let me know as soon as possible so that I can adjust the schedule.

7. It would good to announce where you will be later in the day for questions, since there will be little if any time for questions to be fielded at the time.

Sorry for the rules, but this is hard enough to do in a 6 hour format at the DCC, 45 minutes is really tough.

I'd like a volunteer or two to help distribute handouts so we can minimize disruptions.

Steve K4HG

[Please forward this to any APRS-related lists I miss]

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May 2001

Original source file: picsig.0105
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0105

1. [picsig] Newbie

From: "Steve Davis" <steve@zl2ucx.gen.nz>
Date: Fri, 4 May 2001 21:03:00 +1200
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10768-2001.05.04-04.18.07--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All,

I wonder if there is any activity on this list?

I joined a few days ago, after digging a PIC-E kit out of the corner
and starting to build it up.

I wonder if anyone can confirm that there may be a difference between
the PCB and the instructions/parts supplied.

I have found that I have a few parts over that there is no provision
for on the PCB, and I have a full 7805 and the PCB is designed for a
78L05.

Is there anything else that I should be aware of in differences
between the PCB and the instructions?

73
Steve

--
Talk Around the World - Amateur Radio - http://www.amateur.radio.org.nz
Support Search and Rescue - Don't get lost go to http://www.nzlsar.org.nz
---
Steve Davis ZL2UCX | Internet: steve@zl2ucx.gen.nz
P O Box 120 | www: http://www.zl2ucx.gen.nz
Christchurch | Fax: +64-3-343-0461
New Zealand | Mobile: +64-25-361-796

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2. [picsig] RE: Newbie

From: "Richard Carter" <rich.carter@windriver.com>
Date: Fri, 4 May 2001 09:18:18 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10776-2001.05.04-08.36.20--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I built a pic-e recently. It had some differences in the diodes included,
but they were equivalent parts substitued. There is still interest in the
kit, and work is still being done on the kit.

Regards
Rich - KE1EV

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Steve Davis
Sent: Friday, May 04, 2001 5:03 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Newbie

Hi All,

I wonder if there is any activity on this list?

I joined a few days ago, after digging a PIC-E kit out of the corner
and starting to build it up.

I wonder if anyone can confirm that there may be a difference between

the PCB and the instructions/parts supplied.

I have found that I have a few parts over that there is no provision
for on the PCB, and I have a full 7805 and the PCB is designed for a
78L05.

Is there anything else that I should be aware of in differences
between the PCB and the instructions?

73
Steve

--
Talk Around the World - Amateur Radio - http://www.amateur.radio.org.nz
Support Search and Rescue - Don't get lost go to http://www.nzlsar.org.nz
----
Steve Davis ZL2UCX | Internet: steve@zl2ucx.gen.nz
P O Box 120 | www: http://www.zl2ucx.gen.nz
Christchurch | Fax: +64-3-343-0461
New Zealand | Mobile: +64-25-361-796

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3. [picsig] RE: Newbie

From: "Steven R. Bible" <srbible@gate.net>
Date: Fri, 4 May 2001 07:54:55 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10797-2001.05.04-10.12.20--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Steve,

How long ago did you purchase the kit? We had a small mixup many months ago
where the wrong PCB was included in the kit.

The present production kit has as the voltage regualtor the 7805 in a TO-220
package. The PCB should accept that package. If yours has the TO-92 case
78L05, you have the wrong PCB.

Please email Dorothy at the TAPR office (tapr@tapr.org) and explain to her
what happened. She's gladly exchange the PCB.

Also, the instructions are pretty solid. Over 400 PIC-E's have been sold,
but perhaps not all have been assembled :-).

And questions, ask the list.

- Steve, N7HPR
  (n7hpr@tapr.org)

-----Original Message-----
From: bounce-picsig-6889@lists.tapr.org
[mailto:bounce-picsig-6889@lists.tapr.org]On Behalf Of Steve Davis
Sent: Friday, May 04, 2001 2:03 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Newbie

Hi All,

I wonder if there is any activity on this list?

I joined a few days ago, after digging a PIC-E kit out of the corner
and starting to build it up.

I wonder if anyone can confirm that there may be a difference between
the PCB and the instructions/parts supplied.

I have found that I have a few parts over that there is no provision
for on the PCB, and I have a full 7805 and the PCB is designed for a
78L05.

Is there anything else that I should be aware of in differences
between the PCB and the instructions?

73
Steve

--
Talk Around the World - Amateur Radio - http://www.amateur.radio.org.nz
Support Search and Rescue - Don't get lost go to http://www.nzlsar.org.nz
----
Steve Davis ZL2UCX | Internet: steve@zl2ucx.gen.nz
P O Box 120 | www: http://www.zl2ucx.gen.nz
Christchurch | Fax: +64-3-343-0461
New Zealand | Mobile: +64-25-361-796

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---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] PIC-E code including Altitude?

From: "Pete Hoffswell (ITS)" <pete@itscommunications.com>
Date: Fri, 04 May 2001 11:55:13 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: bbreth@altelco.net
Message-ID: <LYR6890-10811-2001.05.04-11.13.50--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello PIC-E friends -

I am working on the telemetry portion of a payload for a balloon launch,
and just discovered something: GPS NEMA RMC sentences do NOT include
altitude! This makes the very nice MIC-E encoding programs (GPS-E-2G and
pice095) unusable. The FAA requires notification of Balloon altitude.

Do any of you have some PIC-E programs that transmit APRS packets that
include Altitude.

Quick response would be greatly appreciated, as we are scheduled for a
launch tomorrow, May 5!

Thanks and 73!

N9SSA - Pete Hoffswell
Holland, MI - EN62wt - 42.79N 86.15W
n9ssa@arrl.net http://www.qsl.net/n9ssa
QRP-L #2109

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5. [picsig] RE: PIC-E code including Altitude?

From: "Richard Carter" <rich.carter@windriver.com>
Date: Fri, 4 May 2001 12:19:34 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10812-2001.05.04-11.37.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The APRS spec has a reference somewhere for altitude in the comment field.
I don't have time to look it up for you, but you should be able to find this
yourself. I can't help you with a firware update for this.

Regards

Rich - KE1EV

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Pete Hoffswell
(ITS)
Sent: Friday, May 04, 2001 11:55 AM
To: TAPR PIC Development Special Interest Group
Cc: bbreth@altelco.net
Subject: [picsig] PIC-E code including Altitude?

Hello PIC-E friends -

I am working on the telemetry portion of a payload for a balloon launch,
and just discovered something: GPS NEMA RMC sentences do NOT include
altitude! This makes the very nice MIC-E encoding programs (GPS-E-2G and
pice095) unusable. The FAA requires notification of Balloon altitude.

Do any of you have some PIC-E programs that transmit APRS packets that
include Altitude.

Quick response would be greatly appreciated, as we are scheduled for a
launch tomorrow, May 5!

Thanks and 73!

N9SSA - Pete Hoffswell
Holland, MI - EN62wt - 42.79N 86.15W
n9ssa@arrl.net http://www.qsl.net/n9ssa
QRP-L #2109

You are currently subscribed to picsig as: KE1EV@ARRL.net
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

6. [picsig] RE: PIC-E code including Altitude?

From: James Jefferson <jjeffers@deskmedia.com>
Date: Fri, 04 May 2001 12:11:52 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10819-2001.05.04-12.26.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The altitude in comment string is /A=001234 where 1234 is feet

-James Jefferson KB0THN

At 12:19 PM 5/4/01 -0400, you wrote:
>The APRS spec has a reference somewhere for altitude in the comment field.
>I don't have time to look it up for you, but you should be able to find this
>yourself. I can't help you with a firware update for this.
>
>
>Regards
>Rich - KE1EV
>
>-----Original Message-----
>From: bounce-picsig-21297@lists.tapr.org
>[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Pete Hoffswell
>(ITS)
>Sent: Friday, May 04, 2001 11:55 AM
>To: TAPR PIC Development Special Interest Group
>Cc: bbreth@altelco.net
>Subject: [picsig] PIC-E code including Altitude?
>
>
>Hello PIC-E friends -
>
>I am working on the telemetry portion of a payload for a balloon launch,
>and just discovered something: GPS NEMA RMC sentences do NOT include
>altitude! This makes the very nice MIC-E encoding programs (GPS-E-2G and

>pice095) unusable. The FAA requires notification of Balloon altitude.
>
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>include Altitude.
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>Thanks and 73!
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>
>
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>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>
>
>---
>You are currently subscribed to picsig as: jjeffers@deskmedia.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] RE: PIC-E code including Altitude?

From: Jeff King <jeff@aerodata.net>
Date: Fri, 04 May 2001 13:32:10 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10823-2001.05.04-12.50.11--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

James Jefferson wrote:
>
> The altitude in comment string is /A=001234 where 1234 is feet
>
> -James Jefferson KB0THN

> Pete Hoffswell wrote:

> GPS NEMA RMC sentences do NOT include
> >altitude!

You'll need to use both GGA and RMC (if you want speed also).

> >Quick response would be greatly appreciated, as we are scheduled for a
> >launch tomorrow, May 5!

Only one that stands a chance for that kind of turnaround is John Hansen's
C version. You'll need to add a decoder for the GGA sentence. and then append
that reading to the comment field as James points out. Bad news is, at least last
time I played with it, is the code space was almost all used. You could however
go to a 16C622 or 16CE625 as I think it has 1K more of space then the F84, and
would be pin compatible with the PIC-E.

Do you already have the CCS PCM compiler? If you need a PIC16C622 Digikey can
have you one tommorrow.

Regards,

Jeff

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8. [picsig] RE: PIC-E code including Altitude?

From: "Pete Hoffswell [via Yahoo]" <pete@hoffswell.com>
Date: Fri, 04 May 2001 13:38:12 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Message-ID: <LYR6890-10825-2001.05.04-12.56.44--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ahh, Thanks. I wish it were that easy. I will need to obtain current
altitude from my GPS unit, decode it, and encode it into a MIC-E output.

Don't have a program that does that, do you?

At 01:11 PM 5/4/01, you wrote:
>The altitude in comment string is /A=001234 where 1234 is feet
>
>-James Jefferson KB0THN
>
>At 12:19 PM 5/4/01 -0400, you wrote:
>>The APRS spec has a reference somewhere for altitude in the comment field.
>>I don't have time to look it up for you, but you should be able to find this
>>yourself. I can't help you with a firware update for this.
>>
>>
>>Regards
>>Rich - KE1EV
>>
>>-----Original Message-----
>>From: bounce-picsig-21297@lists.tapr.org
>>[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Pete Hoffswell
>>(ITS)
>>Sent: Friday, May 04, 2001 11:55 AM
>>To: TAPR PIC Development Special Interest Group
>>Cc: bbreth@altelco.net
>>Subject: [picsig] PIC-E code including Altitude?
>>
>>
>>Hello PIC-E friends -
>>
>>I am working on the telemetry portion of a payload for a balloon launch,
>>and just discovered something: GPS NEMA RMC sentences do NOT include
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>>Do any of you have some PIC-E programs that transmit APRS packets that
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>>Quick response would be greatly appreciated, as we are scheduled for a
>>launch tomorrow, May 5!
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>>Thanks and 73!
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>>N9SSA - Pete Hoffswell
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>>
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>>You are currently subscribed to picsig as: jjeffers@deskmedia.com
>>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>
>---
>You are currently subscribed to picsig as: pete@hoffswell.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

- Pete

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

9. [picsig] RE: PIC-E code including Altitude?

From: Doug Bade <doug@clecom.com>
Date: Fri, 04 May 2001 13:46:05 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10827-2001.05.04-13.04.03--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

There is a gga version of the pic e code, however it is not
parsing the altitude, it might be easier to use a kpc3 and send the gga
sentence..If we had a couple days we may be able to modify the pic e code
for altitude, as a couple of us have monkeyed a little with the w2fs
code... I use GGA for trimble sv 6's as they have no rmc sentence..Doug KB8GVQ

At 01:38 PM 5/4/01 -0400, you wrote:
>Ahh, Thanks. I wish it were that easy. I will need to obtain current
>altitude from my GPS unit, decode it, and encode it into a MIC-E output.
>
>Don't have a program that does that, do you?
>
>
>
>At 01:11 PM 5/4/01, you wrote:
>>The altitude in comment string is /A=001234 where 1234 is feet
>>
>>-James Jefferson KB0THN
>>
>>At 12:19 PM 5/4/01 -0400, you wrote:
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>>>I don't have time to look it up for you, but you should be able to find this
>>>yourself. I can't help you with a firware update for this.
>>>
>>>
>>>Regards
>>>Rich - KE1EV
>>>
>>>-----Original Message-----
>>>From: bounce-picsig-21297@lists.tapr.org
>>>[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Pete Hoffswell
>>>(ITS)
>>>Sent: Friday, May 04, 2001 11:55 AM
>>>To: TAPR PIC Development Special Interest Group
>>>Cc: bbreth@altelco.net
>>>Subject: [picsig] PIC-E code including Altitude?
>>>
>>>
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>>>
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>>>pice095) unusable. The FAA requires notification of Balloon altitude.
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>>>Quick response would be greatly appreciated, as we are scheduled for a
>>>launch tomorrow, May 5!
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>>>Thanks and 73!
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>>>N9SSA - Pete Hoffswell
>>>Holland, MI - EN62wt - 42.79N 86.15W
>>>n9ssa@arrl.net http://www.qsl.net/n9ssa
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>>

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>>You are currently subscribed to picsig as: pete@hoffswell.com
>>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>
>- Pete
>
>
>---
>You are currently subscribed to picsig as: doug@clecom.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

10. [picsig] RE: PIC-E code including Altitude?

From: Doug Bade <doug@clecom.com>
Date: Fri, 04 May 2001 13:51:54 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10829-2001.05.04-13.09.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

BTW the ONLY compiler version which compiles correctly is the version John
Hansen used, as newer versions do not correctly layout data for the Win GUI
interface to modify correctly for your paramaters... We went round with CCS
on that one, ended up sending to John to compile for us.

At 01:46 PM 5/4/01 -0400, you wrote:
>   There is a gga version of the pic e code, however it is not
> parsing the altitude, it might be easier to use a kpc3 and send the gga
> sentence..If we had a couple days we may be able to modify the pic e code
> for altitude, as a couple of us have monkeyed a little with the w2fs
> code... I use GGA for trimble sv 6's as they have no rmc sentence..Doug KB8GVQ
>
>
>At 01:38 PM 5/4/01 -0400, you wrote:
>>Ahh, Thanks. I wish it were that easy. I will need to obtain current
>>altitude from my GPS unit, decode it, and encode it into a MIC-E output.
>>
>>Don't have a program that does that, do you?
>>
>>

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11. [picsig] RE: PIC-E code including Altitude?

From: John Hansen <john@hansen.net>
Date: Fri, 04 May 2001 13:55:45 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10832-2001.05.04-13.21.20--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 01:51 PM 5/4/01 -0400, you wrote:
>BTW the ONLY compiler version which compiles correctly is the version John
>Hansen used, as newer versions do not correctly layout data for the Win
>GUI interface to modify correctly for your paramaters... We went round
>with CCS on that one, ended up sending to John to compile for us.

This problem came about because of the graphical user interface I wrote for
configuring the chip. If you hard code the settings into the CCS code and
compile it, it should work fine. I think the most promising approach would
be to take the Trimble code that Doug mentioned, strip out all the code for
the second configuration (so you wouldn't have to use something larger than
an F84) and then parse for altitude, hard-coding in the values for
callsign, etc. Then recompile with any version of CCS (and don't run it
through the GUI interface I wrote) and it should work. If you are
launching tomorrow you're probably cutting it a little close on timing though.

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12. [picsig] RE: PIC-E code including Altitude?

From: "Pete Hoffswell [via Yahoo]" <pete@hoffswell.com>
Date: Fri, 04 May 2001 14:07:51 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10833-2001.05.04-13.26.24--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks for everyone's response.

I may issue a NO GO for tomorrow's launch, as the code we would need still
needs to be developed!

We would then delay for at least 2 weeks, giving me time to re-develop our
telemetry transmitter.

Anyone interested in working with me on this new code?

At 01:51 PM 5/4/01, you wrote:
>BTW the ONLY compiler version which compiles correctly is the version John
>Hansen used, as newer versions do not correctly layout data for the Win
>GUI interface to modify correctly for your paramaters... We went round
>with CCS on that one, ended up sending to John to compile for us.
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>At 01:46 PM 5/4/01 -0400, you wrote:
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>> sentence..If we had a couple days we may be able to modify the pic e
>> code for altitude, as a couple of us have monkeyed a little with the
>> w2fs code... I use GGA for trimble sv 6's as they have no rmc
>> sentence..Doug KB8GVQ
>>
>>
>>At 01:38 PM 5/4/01 -0400, you wrote:
>>>Ahh, Thanks. I wish it were that easy. I will need to obtain current
>>>altitude from my GPS unit, decode it, and encode it into a MIC-E output.
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>>>Don't have a program that does that, do you?
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>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

- Pete

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

13. [picsig] RE: PIC-E code including Altitude?

From: "Curt Mills, WE7U" <hacker@tc.fluke.com>
Date: Fri, 4 May 2001 11:20:59 -0700 (PDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10836-2001.05.04-13.38.59--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, 4 May 2001, Pete Hoffswell [via Yahoo] wrote:

> I may issue a NO GO for tomorrow's launch, as the code we would need still
> needs to be developed!
>
> We would then delay for at least 2 weeks, giving me time to re-develop our
> telemetry transmitter.
>
> Anyone interested in working with me on this new code?

If you're looking for a PIC to transmit altitude, you might consider
the TinyTrak. The later versions of the TinyTrak-1 decode GPGGA,
and the TinyTrak-II (still in beta-test) does so also.

Of course if you're making other demands of the PIC, this might not
be a good fit for you. The entire package is smaller and lighter
than a PIC-E though, which might be another consideration.

Curt Mills, WE7U   hacker.NO_*SPAM@tc.fluke.com
Senior Methods Engineer/SysAdmin
"Lotto: A tax on people who are bad at math." -- unknown
"Windows: Microsoft's tax on computer illiterates." -- WE7U

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14. [picsig] RE: PIC-E code including Altitude?

From: Jeff King <jeff@aerodata.net>
Date: Fri, 04 May 2001 14:57:11 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10839-2001.05.04-14.15.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

John Hansen wrote:

> I think the most promising approach would
> be to take the Trimble code that Doug mentioned, strip out all the code for
> the second configuration (so you wouldn't have to use something larger than
> an F84) and then parse for altitude, hard-coding in the values for
> callsign, etc.

I forgot you had already done a GGA version for the Trimble. But if he also wants
to do speed, he is going to need to decode the RMC field as the GGA field doesn't
have speed in it (at least on my garmin GPS-35). Does this code decode both fields?

-Jeff

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

15. [picsig] RE: PIC-E code including Altitude?

From: Bob Bruninga <bruninga@usna.edu>
Date: Fri, 4 May 2001 15:01:42 -0400 (EDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10840-2001.05.04-14.19.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Mic-E format now includes a much more efficient protocol than the old
/A=xxxxxx. It is something like XXX} added as the first 4 bytes of the
status report on the Mic-E. Kenwood is using it for the D7(G) and the
D700... ALl the APRS programs decode it.

XXX is altitude. and goes from -10,000 feed (deep sea) to almost orbital
altitude... Im doing this from memory, but it is simething like that...

Bob

 On Fri, 4 May 2001, Pete
Hoffswell [via Yahoo] wrote:

> Ahh, Thanks. I wish it were that easy. I will need to obtain current
> altitude from my GPS unit, decode it, and encode it into a MIC-E output.
>
> Don't have a program that does that, do you?
>
>
>
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> >-James Jefferson KB0THN
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> >>

> >>Regards
> >>Rich - KE1EV
> >>
> >>-----Original Message-----
> >>From: bounce-picsig-21297@lists.tapr.org
> >>[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Pete Hoffswell
> >>(ITS)
> >>Sent: Friday, May 04, 2001 11:55 AM
> >>To: TAPR PIC Development Special Interest Group
> >>Cc: bbreth@altelco.net
> >>Subject: [picsig] PIC-E code including Altitude?
> >>
> >>
> >>Hello PIC-E friends -
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> >>I am working on the telemetry portion of a payload for a balloon launch,
> >>and just discovered something: GPS NEMA RMC sentences do NOT include
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> >>pice095) unusable. The FAA requires notification of Balloon altitude.
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> >>Do any of you have some PIC-E programs that transmit APRS packets that
> >>include Altitude.
> >>
> >>Quick response would be greatly appreciated, as we are scheduled for a
> >>launch tomorrow, May 5!
> >>
> >>Thanks and 73!
> >>
> >>
> >>N9SSA - Pete Hoffswell
> >>Holland, MI - EN62wt - 42.79N 86.15W
> >>n9ssa@arrl.net http://www.qsl.net/n9ssa
> >>QRP-L #2109
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> >You are currently subscribed to picsig as: pete@hoffswell.com
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>
>
> - Pete
>
>
> ---
> You are currently subscribed to picsig as: bruninga@nadn.navy.mil
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

de WB4APR@amsat.org, Bob

ISS-APRS FAQ: http://web.usna.navy.mil/~bruninga/iss-faq.html
PCsat Design   http://web.usna.navy.mil/~bruninga/pcsat.html
CUBESAT Designs   http://web.usna.navy.mil/~bruninga/cubesat.html
APRS LIVE pages   http://web.usna.navy.mil/~bruninga/aprs.html
APRS SATELLITES   http://web.usna.navy.mil/~bruninga/astars.html
MIM/Mic-E/Mic-Lite http://www.toad.net/~wclement/bruninga/mic-lite.html

---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

16. [picsig] BOF show and tell table

From: Jeff King <jeff@aerodata.net>
Date: Fri, 04 May 2001 15:12:42 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Message-ID: <LYR6890-10842-2001.05.04-14.30.52--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

John:

Will you have a demo table (with power) at the TAPR session as well as at the
packet bash? I have one item (embedded Linux tracker) I want to bring.

Regards,

Jeff

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17. [picsig] Re: BOF show and tell table

From: Jeff King <jeff@aerodata.net>
Date: Fri, 04 May 2001 15:25:23 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10847-2001.05.04-15.01.30--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Opps.... that was supposed to be private

Jeff King wrote:
>
> John:
>
> Will you have a demo table (with power) at the TAPR session as well as at the
> packet bash? I have one item (embedded Linux tracker) I want to bring.
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> Jeff
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---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

18. [picsig] RE: PIC-E code including Altitude?

From: John Hansen <john@hansen.net>
Date: Fri, 04 May 2001 15:58:53 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10856-2001.05.04-15.26.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 02:57 PM 5/4/01 -0400, you wrote:

>John Hansen wrote:
>
> > I think the most promising approach would
> > be to take the Trimble code that Doug mentioned, strip out all the code for
> > the second configuration (so you wouldn't have to use something larger than
> > an F84) and then parse for altitude, hard-coding in the values for
> > callsign, etc.
>
>I forgot you had already done a GGA version for the Trimble. But if he
>also wants
>to do speed, he is going to need to decode the RMC field as the GGA field
>doesn't
>have speed in it (at least on my garmin GPS-35). Does this code decode
>both fields?
>
>-Jeff

I'd have to go back and look at the code, but I remember that it did have
decode two fields. If I remember correctly it was GGA and VTG.

John

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19. [picsig] RE: PIC-E code including Altitude?

From: Doug Bade <doug@clecom.com>
Date: Fri, 04 May 2001 16:40:24 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10862-2001.05.04-15.58.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We did pull course and speed, so I think we did parse vtg too, I will look
at it and get my C buds to look at it and see what we can do. It seems to
me we stripped a bunch already but hard coding would help a bit... maybe
more like use rmc and just parse GGA for the altitude...Probably best
approach..Doug

At 03:58 PM 5/4/01 -0400, you wrote:
>At 02:57 PM 5/4/01 -0400, you wrote:
>
>
>>John Hansen wrote:
>>
>> > I think the most promising approach would
>> > be to take the Trimble code that Doug mentioned, strip out all the
>> code for
>> > the second configuration (so you wouldn't have to use something larger
>> than
>> > an F84) and then parse for altitude, hard-coding in the values for
>> > callsign, etc.
>>
>>I forgot you had already done a GGA version for the Trimble. But if he
>>also wants
>>to do speed, he is going to need to decode the RMC field as the GGA field
>>doesn't
>>have speed in it (at least on my garmin GPS-35). Does this code decode
>>both fields?
>>
>>-Jeff
>
>I'd have to go back and look at the code, but I remember that it did have
>decode two fields. If I remember correctly it was GGA and VTG.
>
>John

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20. [picsig] RE: PIC-E code including Altitude?

From: Doug Bade <doug@clecom.com>
Date: Fri, 04 May 2001 16:43:54 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: greg@snoopy.gwr.com
Message-ID: <LYR6890-10864-2001.05.04-16.01.59--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I think we can take a look at our trimble code and see what we can steal to
get you altitude.. Greg N8XOS did the serious hacking last time, better at
C than I... , I will approach him on it and see what we can do... Doug KB8GVQ

At 02:07 PM 5/4/01 -0400, you wrote:
>Thanks for everyone's response.
>
>I may issue a NO GO for tomorrow's launch, as the code we would need still
>needs to be developed!
>
>We would then delay for at least 2 weeks, giving me time to re-develop our
>telemetry transmitter.
>
>Anyone interested in working with me on this new code?
>
>
>At 01:51 PM 5/4/01, you wrote:
>>BTW the ONLY compiler version which compiles correctly is the version
>>John Hansen used, as newer versions do not correctly layout data for the
>>Win GUI interface to modify correctly for your paramaters... We went
>>round with CCS on that one, ended up sending to John to compile for us.

>>
>>
>>
>>
>>At 01:46 PM 5/4/01 -0400, you wrote:
>>>   There is a gga version of the pic e code, however it is not
>>> parsing the altitude, it might be easier to use a kpc3 and send the gga
>>> sentence..If we had a couple days we may be able to modify the pic e
>>> code for altitude, as a couple of us have monkeyed a little with the
>>> w2fs code... I use GGA for trimble sv 6's as they have no rmc
>>> sentence..Doug KB8GVQ

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21. [picsig] Michigan Balloon Launch May 5 CANCELLED

From: Pete Hoffswell <pete@hoffswell.com>
Date: Fri, 04 May 2001 17:24:21 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10874-2001.05.04-16.43.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello again -

We have discovered, in the 11th hour, that our telemetry system does not
convey altitude information. In order to fly a balloon, you must
communicate your position, including altitude to FAA air traffic
control. This allows them to assure that there will be no Balloon-Aircraft
encounters.

So, we have issues a NO-GO for our May 5'th launching at The Allendale
Highschool Amateur Radio Club of Allendale, Michigan. The launch will be
scheduled for a later date.

If you have any questions, feel free to contact me, or Brian Brethauer
<bbreth@altelco.net> KC8NPH.

What a bummer, huh? But when it comes to Balloons, you do it right, or you
don't do it at all!

- Pete Hoffswell
Holland, Michigan
http://www.hoffswell.com
mailto:pete@hoffswell.com

22. [picsig] RE: Newbie

From: "Steve Davis" <steve@zl2ucx.gen.nz>
Date: Sat, 5 May 2001 09:42:24 +1200
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10875-2001.05.04-16.57.24--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Richard, and the rest of this list,

It is good to see that there is some activity here, and I look
forward to participating further as I get into learning to program
the PIC and play more with the PIC-E.

It appears I had parts and instructions for the Rev 2 PCB, but got an
original PCB. (I have had this sitting around for a while :-)

Can anyone confirm the benefits of the modifications for Rev 2, ie
why R21/C8 were added, why D10 was added, and why R20 was added. D11
was pretty obvious, and is the current requirement actually more than
100m such that a 78L05 is not sufficient??

Thanks
Steve

> I built a pic-e recently. It had some differences in the diodes
> included, but they were equivalent parts substitued. There is still
> interest in the kit, and work is still being done on the kit.

>
> Regards
> Rich - KE1EV
>
>
> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Steve Davis
> Sent: Friday, May 04, 2001 5:03 AM To: TAPR PIC Development Special
> Interest Group Subject: [picsig] Newbie
>
>
> Hi All,
>
> I wonder if there is any activity on this list?
>
> I joined a few days ago, after digging a PIC-E kit out of the corner
> and starting to build it up.
>
> I wonder if anyone can confirm that there may be a difference between
> the PCB and the instructions/parts supplied.
>
> I have found that I have a few parts over that there is no provision
> for on the PCB, and I have a full 7805 and the PCB is designed for a
> 78L05.
>
> Is there anything else that I should be aware of in differences
> between the PCB and the instructions?
>
> 73
> Steve
>
>
> --
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> lost go to http://www.nzlsar.org.nz
> --
> Steve Davis ZL2UCX | Internet: steve@zl2ucx.gen.nz P O Box 120
> | www: http://www.zl2ucx.gen.nz Christchurch | Fax:
>   +64-3-343-0461 New Zealand | Mobile: +64-25-361-796
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--
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----
Steve Davis ZL2UCX | Internet: steve@zl2ucx.gen.nz
P O Box 120 | www: http://www.zl2ucx.gen.nz
Christchurch | Fax: +64-3-343-0461
New Zealand | Mobile: +64-25-361-796

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23. [picsig] Re: Michigan Balloon Launch May 5 CANCELLED

From: Doug Bade <doug@clecom.com>
Date: Fri, 04 May 2001 17:51:45 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10876-2001.05.04-17.09.43--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Pete and the sig;
        Greg N8XOS looked at our previous work and thinks we can have a solution in a few days.. He said it is not REAL ugly :-)...
His biggest concern is table and variable space... Also all should be aware that the Trimble version of the code is inverted as far as rs232 port, it needs a max 232 interface or to be inverted again if connected to an rs232 feed from gps..... some other option may be too use an 1189 / 1188 for a line driver, takes less parts... The Trimble Svee6 used ttl output so interface was at inverted ttl level....
        Let us know if we need to do the coding, unless you can do it yourselves or if John Hansen is interested in doing it.. I am forwarding info to Greg as he is not on the picsig...
        The suggestion of hard coded data is a good plan, as the GUI will not likely parse this version as Greg see's it being done, and would free up a little more code space as John indicated...which means..... we will also need call(s), digipaths, comments etc (all the stuff indicated in the normal pic e GUI using John's code....

At 05:24 PM 5/4/01 -0400, you wrote:
>Hello again -
>
>We have discovered, in the 11th hour, that our telemetry system does not
>convey altitude information. In order to fly a balloon, you must
>communicate your position, including altitude to FAA air traffic
>control. This allows them to assure that there will be no
>Balloon-Aircraft encounters.
>
>So, we have issues a NO-GO for our May 5'th launching at The Allendale
>Highschool Amateur Radio Club of Allendale, Michigan. The launch will be
>scheduled for a later date.
>
>If you have any questions, feel free to contact me, or Brian Brethauer
><bbreth@altelco.net> KC8NPH.
>
>What a bummer, huh? But when it comes to Balloons, you do it right, or
>you don't do it at all!
>
>
>
>
>- Pete Hoffswell
>Holland, Michigan
>http://www.hoffswell.com
>mailto:pete@hoffswell.com

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24. [picsig] Re: Michigan Balloon Launch May 5 CANCELLED

From: Jeff King <jeff@aerodata.net>
Date: Fri, 04 May 2001 18:53:00 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10884-2001.05.04-18.11.14--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Doug Bade wrote:

> Also all should be aware
> that the Trimble version of the code is inverted as far as rs232 port, it
> needs a max 232 interface or to be inverted again if connected to an rs232
> feed from gps.....

CCS has a software option to invert the signal, so no extra hardware needed.

> some other option may be too use an 1189 / 1188 for a
> line driver, takes less parts...

Feeding a RS-232 signal direct to a PIC would not be good. But if you go through a 10K-47K resistor, the signal will clamp at 5.6 volts (and -0.6). There is a weak "diode" on the input of each pin of the PIC to power and ground (except for RA4 on certain parts).

Regards,

Jeff

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25. [picsig] PIC-E Additional Data parsing Project

From: Pete Hoffswell <pete@hoffswell.com>
Date: Fri, 04 May 2001 21:38:20 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10909-2001.05.04-20.56.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi everyone -

Thanks so much for the recent inrush of email regarding our Balloon Launch's little predicament. It's too bad how such a small thing can bring the whole project to a grinding halt. Not to worry - The project manager is in good spirits, and we will be working to reschedule a date in a few weeks.

Yes, few weeks. Holland is host to http://www.tuliptime.com , one of the largest festivals in the country. Tulips. Everywhere. And Tourists. And Parades. And volunteer hams, helping out with safety.

Suffice to say that the community will be a bit busy for the next week or two. We expect that the new launch date will be a few weeks away.

So, now that the pressure is off, we can give our little need some good attention.

While I am a bit of a novice PIC experimenter (http://www.qsl.net/n9ssa/beacon.html) I am thinking N6BG's pice095 code is pretty nice. I like the NEMA decoding section is well commented.

It would be a nice to have a solution that fits into the current stuff out there.

In regards to functionality, I think we should consider both altitude and speed. Don't they both reside in the same nema sentence?

While my programming abilities are somewhat minimal in this regard, I would be more than willing to help out any way I can.

What do you guys think?

N9SSA - Pete Hoffswell
Holland, MI - EN62wt - 42.79N 86.15W
n9ssa@arrl.net http://www.qsl.net/n9ssa
QRP-L #2109

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26. [picsig] Re: PIC-E Additional Data parsing Project

From: "Byon Garrabrant" <byon@byon.com>
Date: Fri, 4 May 2001 20:50:57 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10970-2001.05.04-23.09.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here are a few random notes on the topic of adding altitude encoding to PIC-E:

It will probably be best to work from the GPSE2 or PICE095 source code, as the majority of the task will be already handled.

The course and speed are (only?) in the $GPRMC sentence. The altitude is (only?) in the $GPGGA sentence. So, to encode course, speed, and altitude, both sentences must be decoded.

If you are writing it for a particular GPS, it may be a little easier, as different GPSs send slightly different NMEA data. For example, speed can be encoded as 40, 040, 040.00, 40.0, etc.

Coverting from inverted TTL serial (RS-232 like) to TTL serial (as
needed by the SixVee, is not too bad. In C, I think there is a
compiler define, and in assembly, just swap your bcf and bsf, and
your btfsc and btfss.

There are two APRS ways to output altitude. The APRS text
method is placing /A=001234 in as a comment field, where 1234 is
altitude in feet. The other method is the to add a XXX} field to a
MIC-E packet. Here, XXX is altitude in meters above 10km below
sea level, encoded in base-91!!! (WOW!!!) Since the GPS feeds
you altitude in meters above sea level, both methods will require
some mathematical conversions. In C, the compiler may do this
for you, but in assembly, it's roll your own. Of course, you could
just send the altitude in meters as received from the GPS, with no
conversion, as your comment, but then all APRS clients will not
decode that properly. You could, however, log that data, and parse
it later.

A big problem with doing this on the PIC-E's 16F84 will be code
and data space. I don't remember how much was left in PICE095
and GPSE2, but I don't think it was much. By removing the code
to adjust callsign and other parameters, you could possibily get
enough space back. You could also use a 16F628, which is pin
compatable to the 84, and has double the space, but most of the
existing software 84 programmers will not program the 628. But,
some will (ICPROG probably) and should also work with the PIC-E
LudiPipo on-board programmer.

That about all I can think of. Let me know if I can answer any other
questions.

73,
Byon

_____
 Byon Garrabrant   N6BG   byon@byon.com

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27. [picsig] Re: Michigan Balloon Launch May 5 CANCELLED

From: Doug Bade <doug@ohioaprs.net>
Date: Fri, 04 May 2001 23:58:42 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-10972-2001.05.04-23.15.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I was referring to the version which is archived publicly so that
anyone who uses it realizes that we inverted the "normal version" to work
with the svee6 and do not use it as pic e is built as data will be inverted
from what is needed if a "regular" GPS engine (rs232 nmea) is connected to
the pic e board or equal, and expect it to work... It will not work without
re-compiling or an inverter added, I anticipated someone may try to use it
"as is" and was trying to head it off at the pass...
         While some of use have CCS compilers, I doubt the majority do, so
adding an rs232 type inverting buffer/driver would likely be best way to
test if one was going to try..., but only if one knows it is needed. Doug
KB8GVQ

At 06:53 PM 5/4/2001 -0400, you wrote:

>Doug Bade wrote:
>
> > Also all should be aware
> > that the Trimble version of the code is inverted as far as rs232 port, it
> > needs a max 232 interface or to be inverted again if connected to an rs232
> > feed from gps.....
>
>CCS has a software option to invert the signal, so no extra hardware needed.
>
> > some other option may be too use an 1189 / 1188 for a
> > line driver, takes less parts...
>
>Feeding a RS-232 signal direct to a PIC would not be good. But if you go
>through

>a 10K-47K resistor, the signal will clamp at 5.6 volts (and -0.6). There is a
>weak "diode" on the input of each pin of the PIC to power and ground (except
>for RA4 on certain parts).
>
>Regards,
>
>Jeff

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28. [picsig] AISIN 20$ GPS CODE

From: Neil Thomas <meltek_n@global.co.za>
Date: Sat, 05 May 2001 09:13:44 +0200
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11033-2001.05.05-06.08.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We have written some code for the AISIN gps engine that reads the info
from the gps and currently displays the date, time, lat., long. and
elevation on a 2 X 16 character LCD display. (by using a pb to select
from three views) There are currently 265 memory words free in the PIC
16F84.
The idea is to complete it for APRS using PWM to generate the
packet signal.   If anyone is interested drop me a note and I will
forward you the current ASM file.

Can anyone assist me with the meaning of the error ellipse info output
from the GPS engine?   Can it be used to get the elevation more
accurate?

Neil Thomas ZR2NT
P.O. Box 50115
Colleen Glen
Port Elizabeth 6018
South Africa

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29. [picsig] Re: PIC-E Additional Data parsing Project

From: "Pete Hoffswell [via Yahoo]" <pete@hoffswell.com>
Date: Sat, 05 May 2001 15:41:19 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11107-2001.05.05-14.59.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Byon!

Thanks for the excellent comments. They merge all of the bits of
information I have been obtaining quite well.

I know that the guy that selected the PIC-E had also considered the
tinytrak. I'm going to be breadboarding one of these out for playing
with. I have a tripmate I might devote to the tinytrak project.

How's your work on the tinytrak II coming along? My readings suggest that
you will be parsing both gprmc and gpgga with that unit.

Am I correct in assuming that all the iterations of the tinytrack are
parsing gprmc?

Back to the balloon - I need to resolve my altitude issue. That's either
code for the pic-e, or code for the tinytrak.

So, is there gpgga code for the tt?

Thanks again for the great note, Byon. 73

At 11:50 PM 5/4/01, you wrote:
>Here are a few random notes on the topic of adding altitude
>encoding to PIC-E:
>

>It will probably be best to work from the GPSE2 or PICE095 source
>code, as the majority of the task will be already handled.
>
>The course and speed are (only?) in the $GPRMC sentence. The
>altitude is (only?) in the $GPGGA sentence. So, to encode
>course, speed, and altitude, both sentences must be decoded.
>
>If you are writing it for a particular GPS, it may be a little easier, as
>different GPSs send slightly different NMEA data. For example,
>speed can be encoded as 40, 040, 040.00, 40.0, etc.
>
>Coverting from inverted TTL serial (RS-232 like) to TTL serial (as
>needed by the SixVee, is not too bad. In C, I think there is a
>compiler define, and in assembly, just swap your bcf and bsf, and
>your btfsc and btfss.
>
>There are two APRS ways to output altitude. The APRS text
>method is placing /A=001234 in as a comment field, where 1234 is
>altitude in feet. The other method is the to add a XXX} field to a
>MIC-E packet. Here, XXX is altitude in meters above 10km below
>sea level, encoded in base-91!!! (WOW!!!) Since the GPS feeds
>you altitude in meters above sea level, both methods will require
>some mathematical conversions. In C, the compiler may do this
>for you, but in assembly, it's roll your own. Of course, you could
>just send the altitude in meters as received from the GPS, with no
>conversion, as your comment, but then all APRS clients will not
>decode that properly. You could, however, log that data, and parse
>it later.
>
>A big problem with doing this on the PIC-E's 16F84 will be code
>and data space. I don't remember how much was left in PICE095
>and GPSE2, but I don't think it was much. By removing the code
>to adjust callsign and other parameters, you could possibily get
>enough space back. You could also use a 16F628, which is pin
>compatable to the 84, and has double the space, but most of the
>existing software 84 programmers will not program the 628. But,
>some will (ICPROG probably) and should also work with the PIC-E
>LudiPipo on-board programmer.
>
>That about all I can think of. Let me know if I can answer any other
>questions.
>
>73,
>Byon
>_____________________________________
> Byon Garrabrant   N6BG   byon@byon.com
>
>---
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- Pete

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30. [picsig] Re: PIC-E Additional Data parsing Project

From: "Byon Garrabrant" <byon@byon.com>
Date: Sun, 6 May 2001 15:14:56 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11352-2001.05.06-17.32.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 5 May 2001, at 15:41, Pete Hoffswell [via Yahoo] wrote:

> How's your work on the tinytrak II coming along? My readings suggest
> that you will be parsing both gprmc and gpgga with that unit.

Very well. I expect it to be ready for release by Dayton. I am
parsing both the RMC and GGA sentences. Preliminary details
can be foudn at www.byonics.com/tinytrak2

> Am I correct in assuming that all the iterations of the tinytrack are
> parsing gprmc?

Yes. Some versions of TinyTrak (after about 1.2, I think) also

parsed GGA, but only for position.

> Back to the balloon - I need to resolve my altitude issue. That's
> either code for the pic-e, or code for the tinytrak.
>
> So, is there gpgga code for the tt?

Yes, but not for altitude.

Byon

_____
 Byon Garrabrant   N6BG   byon@byon.com

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31. [picsig] RE: PIC-E code including Altitude?

From: "Antonio Sergio Sena" <asena@bigfoot.com>
Date: Sun, 6 May 2001 23:55:20 +0100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11354-2001.05.06-18.13.28--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yu could use the recent 16F628. Completely compatible with the F84, but with excelente added
features, along with 2k program memory size !!!
And FLASH !!

> Only one that stands a chance for that kind of turnaround is John Hansen's
> C version. You'll need to add a decoder for the GGA sentence. and then append
> that reading to the comment field as James points out. Bad news is, at least last
> time I played with it, is the code space was almost all used. You could however
> go to a 16C622 or 16CE625 as I think it has 1K more of space then the F84, and
> would be pin compatible with the PIC-E.
>
> Do you already have the CCS PCM compiler? If you need a PIC16C622 Digikey can
> have you one tommorrow.
>
> Regards,
>
> Jeff
>
> ---
> You are currently subscribed to picsig as: asena@bigfoot.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

****
Antonio Sergio Sena   CT2GPW
asena@bigfoot.com
+ 44.785.5917270
+ 44.131.4664365

BEng Electrical & Electronic Engineering
Heriot-Watt University - Edinburgh

Homepage: www.qsl.net/ct2gpw
****

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32. [picsig] Re: AISIN 20$ GPS CODE

From: hshk@ix.netcom.com (HSHK)
Date: Mon, 07 May 2001 11:40:58 GMT
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11406-2001.05.07-06.58.20--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Jim,

I have some 8051 code that converts the Aisin binary output
into a NMEA $GPGGA sentence. I also have some code to

generate packet using three output pins forming a three resistor DAC.

As a matter of fact, I converted the packet code from some PIC
code that I had found on the net.

I prefer to use the Atmel AT89S8252. It is an 8051 varient with
8K of in-circut programmable flash code memory, 256 bytes of
RAM and 2K of eeprom in a 40 pin DIP.

Here is the link for the PIC packet code.

http://www.tfs.net/~petek/telemetry/index.html

If interested in my Aisin to $GPGGA 8051 code let me know.

Bill KA8VIT
hshk@ix.netcom.com

On Sat, 05 May 2001 09:13:44 +0200, you wrote:

>We have written some code for the AISIN gps engine that reads the info
>from the gps and currently displays the date, time, lat., long. and
>elevation on a 2 X 16 character LCD display. (by using a pb to select
>from three views) There are currently 265 memory words free in the PIC
>16F84.
>The idea is to complete it for APRS using PWM to generate the
>packet signal.   If anyone is interested drop me a note and I will
>forward you the current ASM file.
>
>Can anyone assist me with the meaning of the error ellipse info output
>from the GPS engine?   Can it be used to get the elevation more
>accurate?
>
>Neil Thomas ZR2NT
>P.O. Box 50115
>Colleen Glen
>Port Elizabeth 6018
>South Africa
>

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33. [picsig] Low cost GPS (AISIN, Tripmate)

From: "Pete Hoffswell [via Yahoo]" <pete@hoffswell.com>
Date: Mon, 07 May 2001 08:27:05 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11413-2001.05.07-07.45.59--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Has anyone been able to purchase more AISIN units? It looks like they've
been out of stock for some time.

I'm considering purchasing the Delorme Tripmate which now is $50 for some
ground-based project.

Does anyone have a better idea for a low cost GPS unit?

> >We have written some code for the AISIN gps engine that reads the info
> >from the gps and currently displays the date, time, lat., long. and
> >elevation on a 2 X 16 character LCD display. (by using a pb to select

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34. [picsig] RE: Newbie

From: "Richard Carter" <rich.carter@windriver.com>
Date: Mon, 7 May 2001 09:35:40 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11418-2001.05.07-08.53.47--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steven
The PTT circuit has always appeared cryptic to me. I'd be very interested

to hear why there are so many discrete parts there. R21 and C8 must be
there to filter out noise on the PTT line. I think that this could have
been done in software. I have no idea why we need R17, D6, D7, D9, and D10.
Maybe someone out there knows the history.

Regards
Rich - KE1EV

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Steve Davis
Sent: Friday, May 04, 2001 5:42 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] RE: Newbie

Hi Richard, and the rest of this list,

It is good to see that there is some activity here, and I look
forward to participating further as I get into learning to program
the PIC and play more with the PIC-E.

It appears I had parts and instructions for the Rev 2 PCB, but got an
original PCB. (I have had this sitting around for a while :-)

Can anyone confirm the benefits of the modifications for Rev 2, ie
why R21/C8 were added, why D10 was added, and why R20 was added. D11
was pretty obvious, and is the current requirement actually more than
100m such that a 78L05 is not sufficient??

Thanks
Steve

> I built a pic-e recently. It had some differences in the diodes
> included, but they were equivalent parts substitued. There is still
> interest in the kit, and work is still being done on the kit.
>
> Regards
> Rich - KE1EV
>
>
> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Steve Davis
> Sent: Friday, May 04, 2001 5:03 AM To: TAPR PIC Development Special
> Interest Group Subject: [picsig] Newbie
>
>
> Hi All,
>
> I wonder if there is any activity on this list?
>
> I joined a few days ago, after digging a PIC-E kit out of the corner
> and starting to build it up.
>
> I wonder if anyone can confirm that there may be a difference between
> the PCB and the instructions/parts supplied.
>
> I have found that I have a few parts over that there is no provision
> for on the PCB, and I have a full 7805 and the PCB is designed for a
> 78L05.
>
> Is there anything else that I should be aware of in differences
> between the PCB and the instructions?
>
> 73
> Steve
>
>
> --
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> lost go to http://www.nzlsar.org.nz
> --
> Steve Davis ZL2UCX | Internet: steve@zl2ucx.gen.nz P O Box 120
> | www: http://www.zl2ucx.gen.nz Christchurch | Fax:
>   +64-3-343-0461 New Zealand | Mobile: +64-25-361-796
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Steve Davis ZL2UCX | Internet: steve@zl2ucx.gen.nz
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35. [picsig] RE: Newbie and PTT problem

From: Ken Isom <isomk@airmail.net>
Date: Mon, 7 May 2001 09:04:32 -0500 (CDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11420-2001.05.07-09.22.11--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

My PIC-E PTT circuit would occasionally lock my HT in transmit mode
if I ran 5 watts with just the rubber ducky. I experimented with
various filtering,grounding, etc. and finally found out that everything was
running fine and that just the PTT analog transistor was
turning on from the RF. I added a small 5v reed relay to the PTT circuit and
that solved the problem.. simply used the existing transistor to drive
the relay.
I also added an LED to the output of my SixV6 OEM GPS card so I have
an indiation that it is outputting properly every few seconds.
Hope this helps others.
Ken   KD5AIA

At 09:35 AM 5/7/01 -0400, you wrote:
>Steven
>The PTT circuit has always appeared cryptic to me. I'd be very interested
>to hear why there are so many discrete parts there. R21 and C8 must be
>there to filter out noise on the PTT line. I think that this could have
>been done in software. I have no idea why we need R17, D6, D7, D9, and D10.
>Maybe someone out there knows the history.
>
>Regards
>Rich - KE1EV
>

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36. [picsig] RE: Newbie and PTT problem

From: David VanHorn <dvanhorn@cedar.net>
Date: Mon, 07 May 2001 09:07:55 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11422-2001.05.07-09.25.52--lyris.picsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

>
>At 09:35 AM 5/7/01 -0400, you wrote:
> >Steven
> >The PTT circuit has always appeared cryptic to me. I'd be very interested
> >to hear why there are so many discrete parts there. R21 and C8 must be
> >there to filter out noise on the PTT line. I think that this could have
> >been done in software. I have no idea why we need R17, D6, D7, D9, and D10.
> >Maybe someone out there knows the history.

I don't have a circuit in front of me, but they're likely to protect the
output transistor, and maybe to limit the time that the transmitter can
stay keyed. You need a hardware limit on this, because your biggest likely
cause is a crashed micro. Having the limit in software won't do you much
good there..

--
Dave's Engineering Page: http://www.dvanhorn.org
Where's dave? http://www.findu.com/cgi-bin/find.cgi?kc6ete-9

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37. [picsig] How did I get re-subscribed?

From: "Art Alto" <aalto@charter.net>
Date: Mon, 7 May 2001 07:08:03 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11423-2001.05.07-09.26.13--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi.

I unsubscribed from this group months ago, but started receiving messages again over the week end. Did somebody restore an old database of subscribers or something?

Art Alto N6VIG

38. [picsig] Re: Low cost GPS (AISIN, Tripmate)

From: hshk@ix.netcom.com (HSHK)
Date: Mon, 07 May 2001 14:16:58 GMT
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: pete@hoffswell.com
Message-ID: <LYR6890-11425-2001.05.07-09.34.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Sorry Pete,

I bought eight of them for $20.00 a piece.

I have one set up for testing.

Two I gave away for favors owed.

Five for use in balloon projects.

On Mon, 07 May 2001 08:27:05 -0400, you wrote:

>Has anyone been able to purchase more AISIN units? It looks like they've
>been out of stock for some time.
>
>I'm considering purchasing the Delorme Tripmate which now is $50 for some
>ground-based project.
>
>Does anyone have a better idea for a low cost GPS unit?
>
>> >We have written some code for the AISIN gps engine that reads the info
>> >from the gps and currently displays the date, time, lat., long. and
>> >elevation on a 2 X 16 character LCD display. (by using a pb to select
>
>
>---
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39. [picsig] Re: How did I get re-subscribed?

From: David VanHorn <dvanhorn@cedar.net>
Date: Mon, 07 May 2001 09:22:24 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11427-2001.05.07-09.40.22--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:08 AM 5/7/01 -0700, Art Alto wrote:
>Hi.
>
>I unsubscribed from this group months ago, but started receiving messages
>again over the week end. Did somebody restore an old database of
>subscribers or something?
>
>Art Alto N6VIG

You can check out any time you like, but you can never leave!   :)

--
Dave's Engineering Page: http://www.dvanhorn.org
Where's dave? http://www.findu.com/cgi-bin/find.cgi?kc6ete-9

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40. [picsig] Re: Low cost GPS (AISIN, Tripmate)

From: Steve Bragg <steve@hamhud.net>
Date: Mon, 07 May 2001 09:42:20 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11433-2001.05.07-10.03.24--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

"Pete Hoffswell [via Yahoo]" wrote:

> Does anyone have a better idea for a low cost GPS unit?

I use the $70 Rand-McNally GPS "pod". It has been working well with my
HamHUD (and now, TinyTrak II) for over a year. It works on any voltage
between about 3.5 and 16. Search the back issues of the SIG for my name
and Rand-McNally to find how to wire it up.

You can buy them on the 'net, or through dealers. Got mine at the local
Best Buy for $79 with a $20 rebate.

73,

Steve Bragg KA9MVA
```
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/_/ |_/_/  |_/____/_/  /_/  |___/_/  |_|
```
Steve Bragg KA9MVA   steve@hamhud.net   ICQ:29816109
HamHUD APRS Mobile Terminal: http://www.hamhud.net
Owasso, Oklahoma, USA
FINDU, FIND ME WITH APRS! http://map.findu.com/ka9mva-3

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41. [picsig] Re: picsig digest: May 06, 2001

From: mark@catolico.com.br
Date: Mon, 7 May 2001 12:53:38 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11447-2001.05.07-11.10.22--lyris.picsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

It would be better switch to ATMEL AVRs ...

On 7 May 2001, at 0:01, TAPR PIC Development Special Interest Gro wrote:

> Subject: RE: PIC-E code including Altitude?
> From: "Antonio Sergio Sena" <asena@bigfoot.com>
> Date: Sun, 6 May 2001 23:55:20 +0100
> X-Message-Number: 2
>
> Yu could use the recent 16F628. Completely compatible with the F84, but with
> excelente added features, along with 2k program memory size !!! And FLASH !!
>
>
>
> > Only one that stands a chance for that kind of turnaround is John Hansen's C
> > version. You'll need to add a decoder for the GGA sentence. and then append
> > that reading to the comment field as James points out. Bad news is, at least
> > last time I played with it, is the code space was almost all used. You could
> > however go to a 16C622 or 16CE625 as I think it has 1K more of space then the
> > F84, and would be pin compatible with the PIC-E.
> >
> > Do you already have the CCS PCM compiler? If you need a PIC16C622 Digikey can
> > have you one tommorrow.
> >
> > Regards,
> >
> > Jeff
> >
> > ---

73, Marcelo - PY3SS
http://py3ss.cjb.net

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42. [picsig] RE: Newbie

From: James Jefferson <jjeffers@deskmedia.com>
Date: Mon, 07 May 2001 11:24:26 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11456-2001.05.07-11.38.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes, it always seems cryptic to me too! I just use a 4N25 opto-isolator
with a current limiting resistor. Two parts for a cost of $0.25. With that
being said, the PIC-E can detect PTT closure on the microphone connected to
it (for MIC-E type transmissions). Methinks there is an easier way... :-)

-James Jefferson KB0THN

>Steven
>The PTT circuit has always appeared cryptic to me. I'd be very interested
>to hear why there are so many discrete parts there. R21 and C8 must be
>there to filter out noise on the PTT line. I think that this could have
>been done in software. I have no idea why we need R17, D6, D7, D9, and D10.
>Maybe someone out there knows the history.
>
>Regards
>Rich - KE1EV
>
>-----Original Message-----
>From: bounce-picsig-21297@lists.tapr.org
>[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Steve Davis
>Sent: Friday, May 04, 2001 5:42 PM
>To: TAPR PIC Development Special Interest Group
>Subject: [picsig] RE: Newbie
>
>
>Hi Richard, and the rest of this list,
>
>It is good to see that there is some activity here, and I look

>forward to participating further as I get into learning to program
>the PIC and play more with the PIC-E.
>
>It appears I had parts and instructions for the Rev 2 PCB, but got an
>original PCB. (I have had this sitting around for a while :-)
>
>Can anyone confirm the benefits of the modifications for Rev 2, ie
>why R21/C8 were added, why D10 was added, and why R20 was added. D11
>was pretty obvious, and is the current requirement actually more than
>100m such that a 78L05 is not sufficient??
>
>Thanks
>Steve
>
>
> > I built a pic-e recently. It had some differences in the diodes
> > included, but they were equivalent parts substitued. There is still
> > interest in the kit, and work is still being done on the kit.
> >
> > Regards
> > Rich - KE1EV
> >
> >
> > -----Original Message-----
> > From: bounce-picsig-21297@lists.tapr.org
> > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Steve Davis
> > Sent: Friday, May 04, 2001 5:03 AM To: TAPR PIC Development Special
> > Interest Group Subject: [picsig] Newbie
> >
> >
> > Hi All,
> >
> > I wonder if there is any activity on this list?
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> > I joined a few days ago, after digging a PIC-E kit out of the corner
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> > I wonder if anyone can confirm that there may be a difference between
> > the PCB and the instructions/parts supplied.
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> > I have found that I have a few parts over that there is no provision
> > for on the PCB, and I have a full 7805 and the PCB is designed for a
> > 78L05.
> >
> > Is there anything else that I should be aware of in differences
> > between the PCB and the instructions?
> >
> > 73
> > Steve
> >
> >
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> > lost go to http://www.nzlsar.org.nz
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> > | www: http://www.zl2ucx.gen.nz Christchurch | Fax:
> >   +64-3-343-0461 New Zealand | Mobile: +64-25-361-796
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>--
>Steve Davis ZL2UCX | Internet: steve@zl2ucx.gen.nz
>P O Box 120 | www: http://www.zl2ucx.gen.nz
>Christchurch | Fax: +64-3-343-0461
>New Zealand | Mobile: +64-25-361-796
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43. [picsig] RE: Newbie and PTT problem

From: "Richard Carter" <rich.carter@windriver.com>
Date: Mon, 7 May 2001 13:03:42 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-11462-2001.05.07-12.21.45--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The RC time constant is on the PTT input to the pic. It won't limit the
transmission time.

A good way to protect against crashed sotware is to use a watchdog timer.
Other PICs, such as the pin-compatible 628 have such a device.

Regards
RC

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of David VanHorn
Sent: Monday, May 07, 2001 10:08 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] RE: Newbie and PTT problem

>
>At 09:35 AM 5/7/01 -0400, you wrote:
> >Steven
> >The PTT circuit has always appeared cryptic to me. I'd be very
interested
> >to hear why there are so many discrete parts there. R21 and C8 must be
> >there to filter out noise on the PTT line. I think that this could have
> >been done in software. I have no idea why we need R17, D6, D7, D9, and
D10.
> >Maybe someone out there knows the history.

I don't have a circuit in front of me, but they're likely to protect the
output transistor, and maybe to limit the time that the transmitter can
stay keyed. You need a hardware limit on this, because your biggest likely
cause is a crashed micro. Having the limit in software won't do you much
good there..

--
Dave's Engineering Page: http://www.dvanhorn.org
Where's dave? http://www.findu.com/cgi-bin/find.cgi?kc6ete-9

You are currently subscribed to picsig as: KE1EV@ARRL.net
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

44. [picsig] Looking for a Beacon Controller

From: "Richard C. Bandla" <rbandla@voicelogix.ca>
Date: Thu, 10 May 2001 18:52:39 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-12048-2001.05.10-18.09.49--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Greetings to the list,
I'm looking for a 900MHz beacon controller. I've had a look at Byon
Garrabrant's PicCon but it will not do exactly what I need - here's what
I'm looking for:
*16F84 or another fairly easy to use PIC
*programmable time interval between announcements, say between 30 sec and
300 sec
*announces call sign and a brief message (grid square)
*keys up a PTT lead throughout time that the message is playing (to turn on
PA) for either CW or MCW
*provides message on CW by keying a lead (either active low or active high)
*provides message on MCW by audio output on a lead
*either CW or MCW (user selectable)
*CW speed programmable between 10 and 25 wpm (approx)

sample message might be:
V V V de VE3CVG in FN25HM V V V

The PicCon does not allow enough message characters and does not provide
the PA control lead during CW (but does during MCW via the PTT lead).
Obviously most of the code is there but ......

I am not a PIC programmer but maybe its time to learn - if I can plagurize
enough code from other applications. Can anyone suggest a ready-made solution?

73.
Rick (VE3CVG)

1355 Minogue Cres., Cumberland, ON, Canada K4C1B4
phone 613 833-2787 (home) fax 613 833 3032
phone 613 833-1950 (work)

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

45. [picsig] Re: Looking for a Beacon Controller

From: Jeff King <jeff@aerodata.net>
Date: Thu, 10 May 2001 19:35:43 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-12055-2001.05.10-18.53.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Take a look at the Basic Stamp. Not ready made, but very very easy to program and
you don't need anything special. Should work out fine for you.

http://www.parallaxinc.com/html_files/getting_started/gettingstarted.htm

-Jeff wb8wka

"Richard C. Bandla" wrote:
>
> Greetings to the list,
> I'm looking for a 900MHz beacon controller.

> I am not a PIC programmer but maybe its time to learn - if I can plagurize
> enough code from other applications. Can anyone suggest a ready-made solution?

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

46. [picsig] Re: Looking for a Beacon Controller

From: David VanHorn <dvanhorn@cedar.net>
Date: Thu, 10 May 2001 18:44:20 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-12057-2001.05.10-19.02.27--lyris.picsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

At 06:52 PM 5/10/01 -0400, Richard C. Bandla wrote:
>Greetings to the list,
>I'm looking for a 900MHz beacon controller. I've had a look at Byon
>Garrabrant's PicCon but it will not do exactly what I need - here's what
>I'm looking for:
>*16F84 or another fairly easy to use PIC
>*programmable time interval between announcements, say between 30 sec and
>300 sec
>*announces call sign and a brief message (grid square)
>*keys up a PTT lead throughout time that the message is playing (to turn on
>PA) for either CW or MCW
>*provides message on CW by keying a lead (either active low or active high)
>*provides message on MCW by audio output on a lead
>*either CW or MCW (user selectable)
>*CW speed programmable between 10 and 25 wpm (approx)

I can offer you the source (which I own) to the agrelo uPLL fox.
It interprets a language stored in EEPROM, and can do all of what you're
listing here, plus control a PLL.
The PLL code would likely have to be re-written.

It's built for the F84

--
Dave's Engineering Page: http://www.dvanhorn.org
Where's dave? http://www.findu.com/cgi-bin/find.cgi?kc6ete-9

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

47. [picsig] Re: Looking for a Beacon Controller

From: David VanHorn <dvanhorn@cedar.net>
Date: Thu, 10 May 2001 18:53:28 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-12060-2001.05.10-19.11.27--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>I can offer you the source (which I own) to the agrelo uPLL fox.

I should probably also mention that I wrote it.
--
Dave's Engineering Page: http://www.dvanhorn.org
Where's dave? http://www.findu.com/cgi-bin/find.cgi?kc6ete-9

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

48. [picsig] Fox Controller

From: David VanHorn <dvanhorn@cedar.net>
Date: Thu, 10 May 2001 19:29:49 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-12063-2001.05.10-19.47.49--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've finally decided to turn this loose.

http://www.dvanhorn.org/Micros/Pic/Index.php

It's an F84 controlled fox, but there's a lot more to it than that.
Included is code to control a PLL, and an interpreted language, so you can
make it do ANYTHING.

You might want to peruse the rest of the site as well.

--
Dave's Engineering Page: http://www.dvanhorn.org
Where's dave? http://www.findu.com/cgi-bin/find.cgi?kc6ete-9

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

49. [picsig] PIC16F84 & External memory

From: "Peter Bennett" <runtime@intelnet.net.gt>
Date: Tue, 15 May 2001 20:12:47
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-12921-2001.05.15-20.31.14--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We are working on a project using a PIC16F84, the PIC is receiving data
from a GPS engine. We want to be able to store the GPS data received
during the day into an external memory for later retrieval. What kind of
memory chip (Flash? NVRAM? etc) should we use and how do we interface it to
the PIC?

Thank you in advance
Peter Bennett

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

50. [picsig] Re: PIC16F84 & External memory

From: James Jefferson <jjeffers@deskmedia.com>
Date: Tue, 15 May 2001 20:25:37 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-12922-2001.05.15-20.40.03--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I would recommend either I2C EEPROM (Microchip makes it - a 24C256 is 32K
bytes of memory for about $4) or FRAM which uses the same interface put is
much faster to write. See www.microchip.com or www.ramtron.com ... CCS's
PCM has software routines for communicating I2C. It should be trivial
(famous last words!) Oh yeah, the interface is two pins.

-James Jefferson KB0THN

At 08:12 PM 5/15/01 +0000, you wrote:
>We are working on a project using a PIC16F84, the PIC is receiving data
>from a GPS engine. We want to be able to store the GPS data received
>during the day into an external memory for later retrieval. What kind of
>memory chip (Flash? NVRAM? etc) should we use and how do we interface it to
>the PIC?
>
>Thank you in advance
>Peter Bennett
>
>---
>You are currently subscribed to picsig as: jjeffers@deskmedia.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

51. [picsig] Re: PIC16F84 & External memory

From: Steve Bragg <steve@hamhud.net>
Date: Tue, 15 May 2001 23:08:54 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-12982-2001.05.15-23.27.01--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Peter Bennett wrote:
>
> We are working on a project using a PIC16F84, the PIC is receiving data
> from a GPS engine. We want to be able to store the GPS data received
> during the day into an external memory for later retrieval. What kind of
> memory chip (Flash? NVRAM? etc) should we use and how do we interface it to
> the PIC?

Hi Peter,

In the HamHUD (www.hamhud.net), I use the Ramtron 8Kx8 serial FRAM for storage
of GPS and packet data (FM25640-P). It's a little 8-pin DIP with the exact same

pinout as the serial EEPROMs. You can write to it at 5 megabits per second,
using SPI, and there are no delays in writing (like there are with EEPROM). The
endurance is whole lot higher than EEPROM, too: 10 BILLION cycles per byte. I
once calculated that with my 4K packet buffer in the HamHUD, it would take
something like 16,000 years to wear out the FRAM at typical APRS packet rates.

YMMV.

73,

Steve KA9MVA
--

==========
Steve Bragg KA9MVA   steve@hamhud.net   ICQ:29816109
HamHUD APRS Mobile Terminal: www.hamhud.net
Owasso, Oklahoma, USA
Owasso Amateur Radio Club www.qsl.net/oarc
FINDU, FIND ME WITH APRS! http://map.findu.com/ka9mva-3

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

52. [picsig] RE: PIC16F84 & External memory

From: "Richard Carter" <rich.carter@windriver.com>
Date: Wed, 16 May 2001 08:57:37 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-13074-2001.05.16-08.16.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You might try a fram chip. They are available in two flavors; 2kb and 8kb.
There is a fram software implementation on the TAPR website.

The '84 doesn't have a synchronous port, so it is awkward to interface with
the fram chip.

Please send me your private e-mail address and I can provide some help with
this.

Regards
Rich Carter - KE1EV

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Peter Bennett
Sent: Tuesday, May 15, 2001 8:13 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] PIC16F84 & External memory

We are working on a project using a PIC16F84, the PIC is receiving data
from a GPS engine. We want to be able to store the GPS data received
during the day into an external memory for later retrieval. What kind of
memory chip (Flash? NVRAM? etc) should we use and how do we interface it to
the PIC?

Thank you in advance
Peter Bennett

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---
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53. [picsig] RE: PIC16F84 & External memory

From: Steve Bragg <steve@hamhud.net>
Date: Wed, 16 May 2001 10:24:12 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

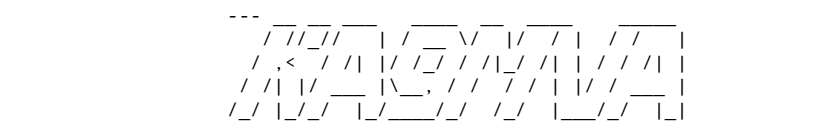
Message-ID: <LYR6890-13091-2001.05.16-10.43.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Richard Carter wrote:
>
> You might try a fram chip. They are available in two flavors; 2kb and 8kb.
> There is a fram software implementation on the TAPR website.
>
> The '84 doesn't have a synchronous port, so it is awkward to interface with
> the fram chip.

I don't know why anyone would use an F84 ever again. The 16F628 is pin
compatible, adds A/D, UART, PWM, and SPI, along with twice the memory.
And, it's two $US cheaper in quantity. One of those running at 10 MHz
will bang an FM25640 at 2.5 MHz quite nicely.

FWIW.

73,

Steve

==========
Steve Bragg KA9MVA   steve@hamhud.net   ICQ:29816109
HamHUD APRS Mobile Terminal: http://www.hamhud.net
Owasso, Oklahoma, USA
FINDU, FIND ME WITH APRS! http://map.findu.com/ka9mva-3

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

54. [picsig] RE: PIC16F84 & External memory

From: David VanHorn <dvanhorn@cedar.net>
Date: Wed, 16 May 2001 12:00:07 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-13106-2001.05.16-12.18.15--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>I don't know why anyone would use an F84 ever again. The 16F628 is pin
>compatible, adds A/D, UART, PWM, and SPI, along with twice the memory.
>And, it's two $US cheaper in quantity. One of those running at 10 MHz
>will bang an FM25640 at 2.5 MHz quite nicely.

I'm writing a code package right now for the 628 that assembles into four
different sets.
It's fun developing four systems at the same time, when they have to talk ,
and none of them is quite right yet!

--
Dave's Engineering Page: http://www.dvanhorn.org
Where's dave? http://www.findu.com/cgi-bin/find.cgi?kc6ete-9

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

55. [picsig] PACK*BASH Reminder

From: John Ackermann   N8UR <jra@febo.com>
Date: Wed, 16 May 2001 14:37:33 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-13118-2001.05.16-13.56.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just a reminder that there will be a PACK*BASH at this year's Hamvention.
The full blurb is below; the short story is that tickets will be available
at the TAPR booth on Friday up until about 2:30PM. There should be room
for everyone who wants to attend.

The speaker will be Steve Bible, N7HPR, talking about "What (and Why) You

Need to Know About Software Defined Radios".

Note that the location is changed from previous years; a map is available
at http://www.tapr.org/tapr/html/dayton.maps.html

Yes, there will be a PACK*BASH this year! Things were a bit uncertain for

a while as we just learned that our traditional site would not be
available
this year. But we've found a very good alternative, and we
invite you to
attend the 2001 PACK*BASH.

If you'd like to attend, please
contact the TAPR office as described below.

What?
        An event
for the digitally-inclined ham, featuring:
        * Buffet dinner

* Keynote Address: Steve Bible, N7HPR on "What (and Why) You Need to Know
About
            Software Defined Radios
        * TAPR special interest group
meetings
        * "Birds of a Feather" gatherings

When?
        Friday
evening, May 18, 2001
        Doors open at 7:00 pm; dinner served at 7:30
pm
        Speaker and meetings after dinner

Where?
        *** NEW LOCATION ***

        The NCR "Sugarcamp" facility that we've used in the past is no longer

        available. Instead, we'll be at Kohler's Banquet Center, 4548

        Presidential Way, Kettering (39 40.75N, 84 08.43W), just south of
        East
David Road between Far Hills Ave. and Wilmington Pike.
        Maps available on
the TAPR web site (www.tapr.org) or at the
        TAPR booth.

How?

Dinner requires advance registration and payment through TAPR.
        Tickets
will be available at the TAPR booth on Friday, though
        we strongly
encourage registration <before> Hamvention. The cost
        is $25.00 per
person, tax and tip included.

        All amateurs are welcome to attend,
enjoy the speaker, and
        particpate in the meetings, although only
those purchasing a dinner
        can eat.

        To register, contact:

        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337

Tucson, AZ   85749-9399

        Phone: (940) 383-0000

Fax: (940)
566-2544
Internet: tapr@tapr.org

Visa/Mastercard Accepted

Who?
PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
Radio,
the national leader in digital communication -- and the
Miami
Valley FM Association, Dayton's packet radio club.

For more
information (including maps), go to

http://www.tapr.org/tapr/html/dayton.html, or send email to tapr@tapr.org.

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

56. [picsig] aisin 16c84 convert

From: "Gustavo Carpignano" <gus@gctelecomar.com>
Date: Thu, 17 May 2001 16:59:23 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-13304-2001.05.17-15.14.38--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello,

Someone know where to find .HEX for convert the hex data to nmea for aisin
gps using 16C84.

TIA.

Gustavo.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

57. [picsig] Re: aisin 16c84 convert

From: Dan Welch <dan@byonics.com>
Date: Thu, 17 May 2001 17:41:46 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-13339-2001.05.17-20.00.26--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Gus,
   http://www.byonics.com/gst-2

-Dan
At 04:59 PM 5/17/01 -0300, you wrote:
>Hello,
>
>Someone know where to find .HEX for convert the hex data to nmea for aisin
>gps using 16C84.
>
>TIA.
>
>Gustavo.
>
>
>
>
>---
>You are currently subscribed to picsig as: dan@byonics.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

```
 - Dan       Email: dan@byonics.com

See the GST-1 Converter for Earthmate GPS units at:
 http://www.byonics.com/gst-1


---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

58. [picsig] Re: aisin 16c84 convert

```
From: James Jefferson <jjeffers@deskmedia.com>
Date: Thu, 17 May 2001 22:08:04 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-13347-2001.05.17-22.22.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

That's actually a PIC12C672 ... but you can pay Byon a few dollars and
he'll send you a chip. Otherwise I believe W1LOU has a free PIC12C672
version floating around, but I haven't had as much luck with it. In any
case, the 12C672's are fun to play with. I cannot believe how much fun I've
been having with a SO8 sized micro!

-Jim

At 05:41 PM 5/17/01 -0700, you wrote:
>Gus,
>    http://www.byonics.com/gst-2
>
>-Dan
>At 04:59 PM 5/17/01 -0300, you wrote:
> >Hello,
> >
> >Someone know where to find .HEX for convert the  hex data to nmea  for aisin
> >gps using 16C84.
> >
> >TIA.
> >
> >Gustavo.
> >
> >
> >
> >
> >---
> >You are currently subscribed to picsig as: dan@byonics.com
> >To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
> >
> >
>
>  - Dan       Email: dan@byonics.com
>
>See the GST-1 Converter for Earthmate GPS units at:
>  http://www.byonics.com/gst-1
>
>
>---
>You are currently subscribed to picsig as: jjeffers@deskmedia.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org


---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

59. [picsig] PIC code for Dallas 1-wire devices

```
From: "Antonio Sergio Sena" <asena@bigfoot.com>
Date: Tue, 22 May 2001 04:45:25 +0100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-14003-2001.05.21-23.04.22--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi!

I am looking for some code to use the 1-wire Dallas devices. I am not looking for the iButtom,
but yes for the others.

I hope i made myself clear. Thanks
```

```
**********************************************************
Antonio Sergio Sena     CT2GPW
asena@bigfoot.com
+ 44.785.5917270
+ 44.131.4664365

BEng Electrical & Electronic Engineering
Heriot-Watt University - Edinburgh

Homepage: www.qsl.net/ct2gpw
**********************************************************

Do NOT send unsolicited commercial email to this email address.
This message neither grants consent to receive unsolicited
commercial email nor is intended to solicit commercial email.



---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

60. [picsig] Re: PIC code for Dallas 1-wire devices

```
From: Jeff King <jeff@aerodata.net>
Date: Tue, 22 May 2001 00:59:47 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-14024-2001.05.22-00.17.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

Here are some PIC C examples:

http://www.phanderson.com/PIC/PICC/CCS_PCM/ds1820.html
http://www.phanderson.com/PIC/PICC/CCS_PCM/ds2430_1.html
http://www.workingtex.com/htpic/Hi-Tech_C_sample_code.htm

-Jeff

Antonio Sergio Sena wrote:

```
> Hi!
>
> I am looking for some code to use the 1-wire Dallas devices. I am not looking for the iButtom,
> but yes for the others.
>
> I hope i made myself clear. Thanks
>
> **********************************************************
> Antonio Sergio Sena     CT2GPW
> asena@bigfoot.com
> + 44.785.5917270
> + 44.131.4664365
>
> BEng Electrical & Electronic Engineering
> Heriot-Watt University - Edinburgh
>
> Homepage: www.qsl.net/ct2gpw
> **********************************************************
>
> Do NOT send unsolicited commercial email to this email address.
> This message neither grants consent to receive unsolicited
> commercial email nor is intended to solicit commercial email.
>
> ---
> You are currently subscribed to picsig as: jeff@aerodata.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

61. [picsig] Re: PIC code for Dallas 1-wire devices

```
From: "Antonio Sergio Sena" <asena@bigfoot.com>
Date: Tue, 22 May 2001 11:28:44 +0100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-14034-2001.05.22-05.47.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

Hi!

I wasnt looking for the C code, but i managed to find Assembly code in the same web link !!
Thanks for it !!!

Sena

> Here are some PIC C examples:
>
> http://www.phanderson.com/PIC/PICC/CCS_PCM/ds1820.html
> http://www.phanderson.com/PIC/PICC/CCS_PCM/ds2430_1.html
> http://www.workingtex.com/htpic/Hi-Tech_C_sample_code.htm
>
>
> -Jeff
>
>

****
Antonio Sergio Sena   CT2GPW
asena@bigfoot.com
+ 44.785.5917270
+ 44.131.4664365

BEng Electrical & Electronic Engineering
Heriot-Watt University - Edinburgh

Homepage: www.qsl.net/ct2gpw
****

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commercial email nor is intended to solicit commercial email.

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

62. [picsig] Easy PIC16F628 Programmer

From: "Peter Bennett" <runtime@intelnet.net.gt>
Date: Tue, 22 May 2001 18:17:03 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-14201-2001.05.22-19.37.07--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello to all,

I would like to know if anyone knows where to find a simple schematic of a PIC16F628 programmer?

Thank you in advance
Peter Bennett

63. [picsig] Need help IDing parts

From: Lee Barnett <lbarnett@claimsware.com>
Date: Thu, 24 May 2001 08:17:06 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-14494-2001.05.24-07.44.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I purchased the PIC-E kit at Dayton. I am having a problem identifying 2
diodes. I looked at them using my magnifying glass, but I can't seem to
pick out any matching numbers. I guess I have a 50/50 chance of getting it
right!

Parts list shows D6 as 1N34 Germanium Diode and D2 as 1N5231BDICT-ND 5.1v
Zener Diode.

I have 2 diodes not accounted for...the larger looks like it has 1499 ITT
on it and I can't make out anything on the other.

Thanks for any help or advise.

73,

Lee, N4GLB

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

64. [picsig] RE: Need help IDing parts

From: "Jeff Kershaw" <JeffK@pactrustlp.com>
Date: Thu, 24 May 2001 12:07:03 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-14571-2001.05.24-14.24.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Lee,

I just built the PIC-E a few months ago. As I recall, the larger of the
two was the germanium one and the other was the Zener.

Jeff KJ6FD

-----Original Message-----
From: bounce-picsig-22547@lists.tapr.org
[mailto:bounce-picsig-22547@lists.tapr.org]On Behalf Of Lee Barnett
Sent: Thursday, May 24, 2001 5:17 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Need help IDing parts

I purchased the PIC-E kit at Dayton. I am having a problem identifying
2
diodes. I looked at them using my magnifying glass, but I can't seem to

pick out any matching numbers. I guess I have a 50/50 chance of getting
it
right!

Parts list shows D6 as 1N34 Germanium Diode and D2 as 1N5231BDICT-ND
5.1v
Zener Diode.

I have 2 diodes not accounted for...the larger looks like it has 1499
ITT
on it and I can't make out anything on the other.

Thanks for any help or advise.

73,
Lee, N4GLB

You are currently subscribed to picsig as: kj6fd@hamnet.net
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---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

65. [picsig] RE: Need help IDing parts

From: Lee Barnett <lbarnett@claimsware.com>
Date: Thu, 24 May 2001 15:09:49 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-14573-2001.05.24-14.37.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

OK, thanks, Jeff, I'll give that a try.

73,
Lee

At 12:07 PM 5/24/2001 -0700, you wrote:
>Lee,
>
>I just built the PIC-E a few months ago. As I recall, the larger of the
>two was the germanium one and the other was the Zener.
>
>Jeff KJ6FD

>
>-----Original Message-----
>From: bounce-picsig-22547@lists.tapr.org
>[mailto:bounce-picsig-22547@lists.tapr.org]On Behalf Of Lee Barnett
>Sent: Thursday, May 24, 2001 5:17 AM
>To: TAPR PIC Development Special Interest Group
>Subject: [picsig] Need help IDing parts
>
>
>I purchased the PIC-E kit at Dayton. I am having a problem identifying
>2
>diodes. I looked at them using my magnifying glass, but I can't seem to
>
>pick out any matching numbers. I guess I have a 50/50 chance of getting
>it
>right!
>
>Parts list shows D6 as 1N34 Germanium Diode and D2 as 1N5231BDICT-ND
>5.1v
>Zener Diode.
>
>I have 2 diodes not accounted for...the larger looks like it has 1499
>ITT
>on it and I can't make out anything on the other.
>
>Thanks for any help or advise.
>
>73,
>Lee, N4GLB
>
>
>---
>You are currently subscribed to picsig as: kj6fd@hamnet.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>---
>You are currently subscribed to picsig as: lbarnett@claimsware.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

66. [picsig] RE: Need help IDing parts

From: "Steven R. Bible" <n7hpr@tapr.org>
Date: Thu, 24 May 2001 19:35:36 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-14621-2001.05.24-21.54.15--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Lee,

Strange that the zener is not marked. But the germanium is the clear glass
diode.

- Steve, N7HPR
  (n7hpr@tapr.org)

> -----Original Message-----
> From: bounce-picsig-6889@lists.tapr.org
> [mailto:bounce-picsig-6889@lists.tapr.org]On Behalf Of Jeff Kershaw
> Sent: Thursday, May 24, 2001 12:07 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Need help IDing parts
>
>
> Lee,
>
> I just built the PIC-E a few months ago. As I recall, the larger of the
> two was the germanium one and the other was the Zener.
>
> Jeff KJ6FD
>
> -----Original Message-----

> From: bounce-picsig-22547@lists.tapr.org
> [mailto:bounce-picsig-22547@lists.tapr.org]On Behalf Of Lee Barnett
> Sent: Thursday, May 24, 2001 5:17 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Need help IDing parts
>
>
> I purchased the PIC-E kit at Dayton. I am having a problem identifying
> 2
> diodes. I looked at them using my magnifying glass, but I can't seem to
>
> pick out any matching numbers. I guess I have a 50/50 chance of getting
> it
> right!
>
> Parts list shows D6 as 1N34 Germanium Diode and D2 as 1N5231BDICT-ND
> 5.1v
> Zener Diode.
>
> I have 2 diodes not accounted for...the larger looks like it has 1499
> ITT
> on it and I can't make out anything on the other.
>
> Thanks for any help or advise.
>
> 73,
> Lee, N4GLB
>
>
> ---
> You are currently subscribed to picsig as: kj6fd@hamnet.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
> ---
> You are currently subscribed to picsig as: n7hpr@tapr.org
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

67. [picsig] RE: Need help IDing parts

From: "Richard Carter" <rich.carter@windriver.com>
Date: Fri, 25 May 2001 08:58:41 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-14688-2001.05.25-08.17.32--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Germanium diodes are typically glass with large cases. Zener diodes are
typically plastic.

Regards
Rich - KE1EV

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Lee Barnett
Sent: Thursday, May 24, 2001 3:10 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] RE: Need help IDing parts

OK, thanks, Jeff, I'll give that a try.

73,
Lee

At 12:07 PM 5/24/2001 -0700, you wrote:
>Lee,
>
>I just built the PIC-E a few months ago. As I recall, the larger of the
>two was the germanium one and the other was the Zener.
>
>Jeff KJ6FD
>
>-----Original Message-----

>From: bounce-picsig-22547@lists.tapr.org
>[mailto:bounce-picsig-22547@lists.tapr.org]On Behalf Of Lee Barnett
>Sent: Thursday, May 24, 2001 5:17 AM
>To: TAPR PIC Development Special Interest Group
>Subject: [picsig] Need help IDing parts
>
>
>I purchased the PIC-E kit at Dayton. I am having a problem identifying
>2
>diodes. I looked at them using my magnifying glass, but I can't seem to
>
>pick out any matching numbers. I guess I have a 50/50 chance of getting
>it
>right!
>
>Parts list shows D6 as 1N34 Germanium Diode and D2 as 1N5231BDICT-ND
>5.1v
>Zener Diode.
>
>I have 2 diodes not accounted for...the larger looks like it has 1499
>ITT
>on it and I can't make out anything on the other.
>
>Thanks for any help or advise.
>
>73,
>Lee, N4GLB
>
>
>---
>You are currently subscribed to picsig as: kj6fd@hamnet.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>---
>You are currently subscribed to picsig as: lbarnett@claimsware.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: KE1EV@ARRL.net
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You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

68. [picsig] RE: Need help IDing parts

From: Ken Isom <isomk@airmail.net>
Date: Fri, 25 May 2001 10:31:55 -0500 (CDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-14718-2001.05.25-10.50.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Can't you measure the slight voltage drop difference between the two?
I use a current limited adjustable power supply to sort/test my zeners.

Enjoy.
Ken
KD5AIA

At 08:58 AM 5/25/01 -0400, you wrote:
Germanium diodes are typically glass with large cases. Zener diodes are
typically plastic.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

69. [picsig] regrx

From: "Gustavo Carpignano" <gus@gctelecomar.com>
Date: Tue, 29 May 2001 06:57:55 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-15346-2001.05.29-05.13.16--lyris.picsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

Hello

I testing reg_rx , N0QBH application, for pic-e board, but I copy with
difficult the serial
output. I can see the power up message fine. I using a null modem cable and
hyperterm at 4800,8,N,
1. Mike, N0QBH, told about a 10K resistor in serie with data line to pin #2
wouldn´t allow to copy
the serial output. Can someone told what resistor # and pin # is ?
What other difficult can be for not decode packets or serial out ?

Regards.

Gustavo, LW2DTZ

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

70. [picsig] Re: picsig digest: May 29, 2001

From: "Mike Berg" <mikeberg@tds.net>
Date: Wed, 30 May 2001 06:35:43 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-15580-2001.05.30-06.53.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I copied this from an earlier post to the group:
                                                    Mike Berg N0QBH

After the TCM3105 no longer was available, i also tried the MX614 (or
MX614). I found the input-voltage-range to be much more critical with
the new chip. Input-Levels accepted by the TCM3105 without problems,
caused bad ore no detection because they are probably already too high
for the MX.
Until today i haven't tried to find out the optimal level by using an
oszilloscope, but after modifying the MX 614-Input of my PIC-E, i could
improve it's practical reception capability a lot.
At first i decreased the input sensitivity by changing resistor R9 from
10 KOhm to 100KOhm. Secondly i added a serial capacitor 0.1uF within the
audio-input-line. This especially is necessary in case the connected
radio has any DC-Level on it's speaker-output and is spoiling the bias
of MX614-Input.

73 de Klaus DJ7OO

-----Original Message-----
From: TAPR PIC Development Special Interest Group digest
<picsig@lists.tapr.org>
To: picsig digest recipients <picsig@lists.tapr.org>
Date: Tuesday, May 29, 2001 11:41 PM
Subject: picsig digest: May 29, 2001

>TAPR PIC Development Special Interest Group Digest for Tuesday, May 29,
2001.
>
>1. regrx
>
>---
>
>Subject: regrx
>From: "Gustavo Carpignano" <gus@gctelecomar.com>
>Date: Tue, 29 May 2001 06:57:55 -0300
>X-Message-Number: 1
>
>Hello
>
>I testing reg_rx , N0QBH application, for pic-e board, but I copy with
>difficult the serial
>output. I can see the power up message fine. I using a null modem cable a=
>nd
>hyperterm at 4800,8,N,
>1. Mike, N0QBH, told about a 10K resistor in serie with data line to pin =

>#2
>wouldn=B4t allow to copy
>the serial output. Can someone told what resistor # and pin # is ?
>What other difficult can be for not decode packets or serial out ?
>
>Regards.
>
>Gustavo, LW2DTZ
>
>
>
>
>
>
>---
>
>END OF DIGEST
>
>---
>You are currently subscribed to picsig as: mikeberg@midstate.tds.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

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June 2001

Original source file: picsig.0106
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0106

1. [picsig] beginner

From: "Timothy MacDonald" <twdm@mediaone.net>
Date: Sat, 2 Jun 2001 18:29:10 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16333-2001.06.02-17.47.30--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Reviewing the TAPR web page and all the APRS offerings it appears to me that
the combination of the Pic-E, Garmin GPS 20/25 interface, and the Garmin GPS
ought to provide the means for a complete APRS tracking/transmitting unit,
but no where do I find any information on putting it all together into a
working unit.

Am I any where close in my impressions and if so where do I look for details
(another TAPR SIG or else where on the web)?

Thanks for listening/reading and thanks for any help.

- from the keypad of TWDM
KB1GFV@arrl.net
www.runoff.org

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] serial memory

From: "Gustavo Carpignano" <gus@gctelecomar.com>
Date: Sun, 3 Jun 2001 20:56:18 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16570-2001.06.04-05.10.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I interesting to test ramdigi, with Ramtron 25160, 2k serial memory, but is
difficult to find it.
Someone test other 2k serial memory like microchip series.

TIA.

Gustavo, LW2DTZ

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] Re: beginner

From: "Curt Mills, WE7U" <hacker@tc.fluke.com>
Date: Mon, 4 Jun 2001 10:01:32 -0700 (PDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16651-2001.06.04-12.20.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Sat, 2 Jun 2001, Timothy MacDonald wrote:

> Reviewing the TAPR web page and all the APRS offerings it appears to me that
> the combination of the Pic-E, Garmin GPS 20/25 interface, and the Garmin GPS
> ought to provide the means for a complete APRS tracking/transmitting unit,
> but no where do I find any information on putting it all together into a
> working unit.
>
> Am I any where close in my impressions and if so where do I look for details
> (another TAPR SIG or else where on the web)?

Try www.byonics.com also. The TinyTrak-II is awfully cool, and
cheaper/smaller than the PIC-E if you're after a transmitting
tracker only. That's what I run. I'd go with a GPS-35 though
unless you want an extremely small package and want to do a bunch
more wiring. You'll also need an antenna if you use a GPS20 or 25
board. Even better is to use a handheld Garmin, so that you can
use it for other purposes as well.

There are also the MIM and MIM-II?, and the TigerTrak units.
www.nwaprs.org might give you some more pointers.

The other tapr mailing lists are an extremely good source of info.

Curt Mills, WE7U   hacker.NO_*SPAM@tc.fluke.com
Senior Methods Engineer/SysAdmin
"Lotto: A tax on people who are bad at math." -- unknown
"Windows: Microsoft's tax on computer illiterates." -- WE7U

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] Need help with Wx PIC-E

From: Lee Barnett <lbarnett@claimsware.com>
Date: Mon, 04 Jun 2001 14:53:07 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16661-2001.06.04-14.21.27--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am trying to get a PIC-E to work as a stand alone weather node. So far
the board goes through the diagnostic test and through setting deviation
fine. When I load the U2K software, nothing happens. Here is what I have
done:

Edit options.asm - changed callsign and beacon text.
Ran MPASMWIN.EXE with all default settings. File = c:\pic-2\u2k\wx-e.asm
No errors reported.
Removed JP4.
Ran PICPROG. PWRTE = on, HS fuse = on.
Replaced JP4.

Hooked the PIC-E to the radio that was tested in the deviation setting
operation. Hooked 12 volts to PIC-E. Waited...waited...nothing happens.

I then hooked a Peet Brothers U-100 up to the serial in port. I am using
the U-100 because the U-2000 is at my lake house an hour away. Put the
U-100 in long format mode. Waited...waited...nothing happens.

Should anything happen when no serial device is connected? Should the
PIC-E work with the U-100?

I am sure it is something so simple that I am just missing it. Anyone got
any ideas?

TNX & 73,
Lee, N4GLB

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] Re: Need help with Wx PIC-E

From: "Guy J. Story" <kc5goi@pacecar.infospeedway.net>
Date: Mon, 4 Jun 2001 14:10:48 -0500 (CDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16663-2001.06.04-14.30.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

did you use a null modem?

--
73 from
Guy Story, KC5GOI
Silver Dome MHP # 79
Denton Texas, 76208
www.kc5goi.net
kc5goi@kc5goi.net

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

6. [picsig] Re: Need help with Wx PIC-E

From: Lee Barnett <lbarnett@claimsware.com>
Date: Mon, 04 Jun 2001 15:50:45 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16670-2001.06.04-15.18.58--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Actually I am using the Peet Brothers serial cable that comes with their
software. According to the documentation (I don't have it with me right
now) it is pin 3 to 3 and 5 to 5. So I guess the answer is no.

Lee

At 02:10 PM 6/4/2001 -0500, you wrote:
>did you use a null modem?
>
>--
>73 from
>Guy Story, KC5GOI
>Silver Dome MHP # 79
>Denton Texas, 76208
>www.kc5goi.net
>kc5goi@kc5goi.net
>
>
>---
>You are currently subscribed to picsig as: lbarnett@claimsware.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] Re: Need help with Wx PIC-E

From: "Guy J. Story" <kc5goi@pacecar.infospeedway.net>
Date: Mon, 4 Jun 2001 15:33:57 -0500 (CDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16676-2001.06.04-15.53.19--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am trying to remember if I have to use a null modem when I use the PIC-E
with my Garmin. I do not think I do but the cable I built already may do
the twist. I am pretty sure it does.

--
73 from
Guy Story, KC5GOI
Silver Dome MHP # 79
Denton Texas, 76208
www.kc5goi.net
kc5goi@kc5goi.net

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

8. [picsig] Re: Need help with Wx PIC-E

From: Lee Barnett <lbarnett@claimsware.com>
Date: Mon, 04 Jun 2001 16:31:29 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16678-2001.06.04-15.59.43--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If I don't have the weather station connected, will the PIC-E transmit or
does it just wait for data?

Lee

At 03:33 PM 6/4/2001 -0500, you wrote:
>I am trying to remember if I have to use a null modem when I use the PIC-E
>with my Garmin. I do not think I do but the cable I built already may do
>the twist. I am pretty sure it does.

>
>--
>73 from
>Guy Story, KC5GOI
>Silver Dome MHP # 79
>Denton Texas, 76208
>www.kc5goi.net
>kc5goi@kc5goi.net
>
>
>---
>You are currently subscribed to picsig as: lbarnett@claimsware.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

9. [picsig] Re: Need help with Wx PIC-E

From: "Guy J. Story" <kc5goi@pacecar.infospeedway.net>
Date: Mon, 4 Jun 2001 15:55:14 -0500 (CDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16681-2001.06.04-16.14.32--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

When it is used as a MIC-E emulator, invalid GPS will prevent it from
transmitting. You need to see is Steve D. responds since I think it is
his code for the wx station. The firmware determines if it will tx or
not.

--
73 from
Guy Story, KC5GOI
Silver Dome MHP # 79
Denton Texas, 76208
www.kc5goi.net
kc5goi@kc5goi.net

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

10. [picsig] Re: Need help with Wx PIC-E

From: Ernie Howard <ag8y@voyager.net>
Date: Mon, 04 Jun 2001 16:53:23 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16692-2001.06.04-17.14.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We tried to get the PIC-E running on WX here in SW Ohio. It is running
but there are problems. The code posted on TAPR is incomplete, early
beta. It transmits every minute. Certain combinations of values causes
it to send wind speeds in excess of 250mph. Someone is updating the
code but I haven't heard anything lately. It is connected to a Peet
U-2000. If I remember right, the serial cable supplied with the U-2000
is all that was needed. Possibly the output format from the 100 isn't
the same?

Sounds like you assembled the code ok. It's been a few months since I
did it myself.

73 Ernie W8EH

--

Ernie Howard, Jr   W8EH   Middletown, Ohio
E-mail: w8eh@arrl.net
How's the weather at W8EH? - http://wx.findu.com/w8eh
Web Page: http://my.ohio.voyager.net/~w8eh

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

11. [picsig] Re: Need help with Wx PIC-E

From: Steve Dimse <sdimse@telocity.com>
Date: Mon, 4 Jun 2001 19:59:13 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16720-2001.06.04-19.18.34--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 6/4/01 5:53 PM Ernie Howard (ag8y@voyager.net) wrote:

>We tried to get the PIC-E running on WX here in SW Ohio. It is running
>but there are problems. The code posted on TAPR is incomplete, early
>beta. It transmits every minute. Certain combinations of values causes
>it to send wind speeds in excess of 250mph. Someone is updating the
>code but I haven't heard anything lately. It is connected to a Peet
>U-2000. If I remember right, the serial cable supplied with the U-2000
>is all that was needed. Possibly the output format from the 100 isn't
>the same?
>
If someone is working on the code it is news to me. I'm pretty sure it is
set to transmit every 5 minutes, though I suppose it could be a
development version, it is easy to change though. The rain support is
incomplete, if I recall it only sends one of three rain fields.

No one ever reported any bugs with it to me, other than I have heard
there is a problem if you run it without a humidity sensor. I ran it for
several months at my house without seeing any problems.

Steve K4HG

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

12. [picsig] Re: Need help with Wx PIC-E

From: Steve Dimse <sdimse@telocity.com>
Date: Mon, 4 Jun 2001 19:59:21 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16721-2001.06.04-19.18.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 6/4/01 4:31 PM Lee Barnett (lbarnett@claimsware.com) wrote:

>If I don't have the weather station connected, will the PIC-E transmit or
>does it just wait for data?
>
It won't transmit unless it sees data. (What would it transmit anyway?)

Steve K4HG

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

13. [picsig] Re: Need help with Wx PIC-E

From: "Rich Clemens" <clemens@wvwc.edu>
Date: Mon, 4 Jun 2001 23:00:40 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16746-2001.06.04-22.26.27--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have worked on the code and have noted errors in wind speed and direction
with current code. My version will only use the "packet" mode output from
the U2000.

----Someone is updating the
> >code but I haven't heard anything lately. It is connected to a Peet
> >U-2000. If I remember right, the serial cable supplied with the U-2000
> >is all that was needed. Possibly the output format from the 100 isn't
> >the same?
> >

KB8AOB

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

14. [picsig] Re: Need help with Wx PIC-E

From: "Byon Garrabrant" <byon@byon.com>
Date: Mon, 4 Jun 2001 22:18:00 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16774-2001.06.05-00.36.50--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 4 Jun 2001, at 15:55, Guy J. Story wrote:

> When it is used as a MIC-E emulator, invalid GPS will prevent it from
> transmitting. You need to see is Steve D. responds since I think it
> is his code for the wx station. The firmware determines if it will tx
> or not.

Actually, PICE095 will transmit the last GPS data it received, valid
or not, at the programed intervals. I think GPSE will stop sending if
GPS stream stops, but it will send invalid (without satellite lock)
data.

Byon

_____
 Byon Garrabrant   N6BG   byon@byon.com

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

15. [picsig] Re: Need help with Wx PIC-E

From: "Rich Clemens" <clemens@wvwc.edu>
Date: Tue, 5 Jun 2001 06:25:34 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-16789-2001.06.05-05.39.45--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

----- Original Message -----
From: "Lee Barnett" <lbarnett@claimsware.com>
[picsig] Need help with Wx PIC-E

> I am trying to get a PIC-E to work as a stand alone weather node.

Have you connected a terminal to the U-100 to see if the wx station is
really sending any data?

Is the code at the beginning of a packet on the U-100 the same as a U-2000?
As I remember there is code at the beginning and the PIC that looks for the
first few letters to key the data capture.

Is the baud rate the same for the U-100 and the U-2000? Stop bits and
parity?

Rich

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

16. [picsig] Re: Need help with Wx PIC-E

From: Ernie Howard <ag8y@voyager.net>
Date: Thu, 07 Jun 2001 16:03:08 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-17319-2001.06.07-16.21.47--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Steve,

If you have a later version, could you post it to TAPR. The version we
downloaded and installed on N8YLS-3 does transmit every 1 minute. And
there seems to be a bug that causes wind speeds to be above 200 mph. It
is rare, but when it shows, it may do it several times on the same day.

Thanks,

73 Ernie W8EH

Steve Dimse wrote:
>
> On 6/4/01 5:53 PM Ernie Howard (ag8y@voyager.net) wrote:
>
> >We tried to get the PIC-E running on WX here in SW Ohio. It is running
> >but there are problems. The code posted on TAPR is incomplete, early
> >beta. It transmits every minute. Certain combinations of values causes
> >it to send wind speeds in excess of 250mph. Someone is updating the
> >code but I haven't heard anything lately. It is connected to a Peet
> >U-2000. If I remember right, the serial cable supplied with the U-2000
> >is all that was needed. Possibly the output format from the 100 isn't
> >the same?
> >
> If someone is working on the code it is news to me. I'm pretty sure it is
> set to transmit every 5 minutes, though I suppose it could be a
> development version, it is easy to change though. The rain support is
> incomplete, if I recall it only sends one of three rain fields.
>
> No one ever reported any bugs with it to me, other than I have heard
> there is a problem if you run it without a humidity sensor. I ran it for
> several months at my house without seeing any problems.
>
> Steve K4HG
>
> ---
> You are currently subscribed to picsig as: ag8y@voyager.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

--

Ernie Howard, Jr   W8EH   Middletown, Ohio
E-mail: w8eh@arrl.net
Where's my van? - http://map.findu.com/w8eh-8
How's the weather at W8EH? - http://wx.findu.com/w8eh
Web Page: http://my.ohio.voyager.net/~w8eh

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

17. [picsig] Re: Need help with Wx PIC-E

From: David VanHorn <dvanhorn@cedar.net>
Date: Thu, 07 Jun 2001 16:14:27 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-17320-2001.06.07-16.33.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 04:03 PM 6/7/01 -0500, Ernie Howard wrote:
>Hi Steve,
>
>If you have a later version, could you post it to TAPR. The version we
>downloaded and installed on N8YLS-3 does transmit every 1 minute. And
>there seems to be a bug that causes wind speeds to be above 200 mph. It
>is rare, but when it shows, it may do it several times on the same day.

I've seen that! Your wind vector stretches across indiana sometimes. :)

--
Dave's Engineering Page: http://www.dvanhorn.org

I would have a link to http://www.findu.com/cgi-bin/find.cgi?KC6ETE-9 here
in my signature line, but due to the inability of sysadmins at TELOCITY to
differentiate a signature line from the text of an email, I am forbidden to
have it.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

18. [picsig] Re: Need help with Wx PIC-E

From: "Thomas M. Schaefer" <toms@inconnect.com>
Date: Thu, 7 Jun 2001 15:17:30 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-17321-2001.06.07-16.37.03--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just out of curiosity, has anyone modified the WX code to handle the Davis
format?

Thanks,

Tom NY4I
----- Original Message -----
From: "David VanHorn" <dvanhorn@cedar.net>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Thursday, June 07, 2001 3:14 PM
Subject: [picsig] Re: Need help with Wx PIC-E

> At 04:03 PM 6/7/01 -0500, Ernie Howard wrote:
> >Hi Steve,
> >
> >If you have a later version, could you post it to TAPR. The version we
> >downloaded and installed on N8YLS-3 does transmit every 1 minute. And
> >there seems to be a bug that causes wind speeds to be above 200 mph. It
> >is rare, but when it shows, it may do it several times on the same day.
>
> I've seen that! Your wind vector stretches across indiana sometimes. :)
>
> --
> Dave's Engineering Page: http://www.dvanhorn.org
>
> I would have a link to http://www.findu.com/cgi-bin/find.cgi?KC6ETE-9 here
> in my signature line, but due to the inability of sysadmins at TELOCITY to
> differentiate a signature line from the text of an email, I am forbidden
to
> have it.
>
>
>
> ---
> You are currently subscribed to picsig as: toms@inconnect.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

19. [picsig] PIC-E weather node

From: Lee Barnett <lbarnett@claimsware.com>
Date: Fri, 08 Jun 2001 16:30:13 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-17560-2001.06.08-15.59.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am still working on a PIC-E weather node. It now transmits APRS
data! Here is the problem now.

My Kenwood D700 and D7A both receive the data from the weather station OK
except the second screen on the D7A has r...p...P03<h0=b1014   on it. The
rest of the screens appear to be correct except for the rainfall data.

Findu.com does not seem to be getting data. It has only updated once.

I connected to www.aprs.net and captured some data to examine. There are
two different posting:

N4GLB-3>APE001,N4VDE-3,KA4YMY-9*,WIDE:!3442.85N/08256.70W_Pic-E U-2000
stand alone!

N4GLB-3>APE001,KA4YMY-8*,WIDE,WIDE:_06091300c349s000g003t076r...p...P03<h0=b10148eU2k

I looked at the PIC-E software and the beacon text is set to send every 3
data transmissions.

Looking at the APRS Protocol Reference, it looks like need to be

transmitting a combination of the the two.

The software I am using is from the tapr.org site and is the U2K.zip file
posted on 2/16/99. Does anyone have a newer version?

Any other ideas?

TNX & 73,
Lee, N4GLB

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

20. [picsig] Re: PIC-E weather node

From: Steve Dimse <k4hg@tapr.org>
Date: Fri, 8 Jun 2001 17:27:47 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-17566-2001.06.08-16.47.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 6/8/01 4:30 PM Lee Barnett (lbarnett@claimsware.com) wrote:

>N4GLB-3>APE001,KA4YMY-8*,WIDE,WIDE:_06091300c349s000g003t076r...p...P03<h0
>=b10148eU2k
>
>I looked at the PIC-E software and the beacon text is set to send every 3
>data transmissions.
>
>Looking at the APRS Protocol Reference, it looks like need to be
>transmitting a combination of the the two.
>
No, findu works with positionless weather. Unless you had a typo in what
you sent, I see the error. The P field must be three digits, the SQL
insert will choke on the P03<

Steve K4HG

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

21. [picsig] C2C compiler

From: "KPo_LH Mobilradio A/S" <kpo@lhmobil.dk>
Date: Mon, 11 Jun 2001 23:12:21 +0200
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-18067-2001.06.11-16.28.03--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dear all

I wonder if any of you fellows having the freeware version of the C2C compiler (filename c2cw328.zip) ?
and are able to mail me directly with a copy as attachment kpo@lhmobil.dk. The homepage for the C2C
compiler has some none working links for that version.
For those not aware of this very nice product, which even can be fully integrated with the MPLAB
assembler (from C code all the way through to hexcode and even programming the chip if You wish), then
look at http://www.geocities.com/SiliconValley/Network/3656/c2c/c.html
and http://www.geocities.com/SiliconValley/Network/3656/index.html, where some nice tolls are available
for all "pic fans".

Kind regards

Kurt de OZ7OU
[Attachment: Kurt Poulsen.vcf; text/x-vcard; 407 bytes]

22. [picsig] MX-COM CMX469A ?

From: mark@catolico.com.br
Date: Fri, 15 Jun 2001 14:36:05 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-18680-2001.06.15-12.54.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I was reading the CMX469A datasheet and it seems to be an interesting
IC to experiment with.

It does 1200/2400/4800 bps MSK with the following tones :

- At 1200 bps it uses 1200/1800 Hz tones.
- At 2400 bps it uses 1200/2400 Hz tones.
- At 4800 bps it uses 2400/4800 Hz tones.

Wouldn't it be suitable to use with VHF/UHF radios ? Even @ 4800 bps ?

Comments, please.

73, Marcelo - PY3SS
http://py3ss.cjb.net

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

23. [picsig] RE: MX-COM CMX469A ?

From: "Richard Carter" <rich.carter@windriver.com>
Date: Fri, 15 Jun 2001 14:05:27 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-18686-2001.06.15-13.25.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The 4800 baud tones look too high. Are you sure about these tones? I
haven't seen anybody use 2400 or 4800 baud. Unless you were using it for
some kind of private project, I don't know what use it would be. I've had
my eye out for a 9600 baud modem chip, but my measurements indicate that a
mid-range PIC chip running about 20mhz would have trouble keeping up with
9600 baud unless you spin on the timer. The interrupt rate is too high.
There are some new PIC chips in the pipeline that run at 40Mhz. These could
handle 9600 baud if we could find a chip to support it.

Regards
Rich

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of
mark@catolico.com.br
Sent: Friday, June 15, 2001 1:36 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] MX-COM CMX469A ?

I was reading the CMX469A datasheet and it seems to be an interesting
IC to experiment with.

It does 1200/2400/4800 bps MSK with the following tones :

- At 1200 bps it uses 1200/1800 Hz tones.
- At 2400 bps it uses 1200/2400 Hz tones.
- At 4800 bps it uses 2400/4800 Hz tones.

Wouldn't it be suitable to use with VHF/UHF radios ? Even @ 4800 bps ?

Comments, please.

73, Marcelo - PY3SS
http://py3ss.cjb.net

You are currently subscribed to picsig as: KE1EV@ARRL.net
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org

To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

24. [picsig] RE: MX-COM CMX469A ?

From: Ray Vaughan <ray@rayvaughan.com>
Date: Fri, 15 Jun 2001 14:30:18 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-18688-2001.06.15-13.50.24--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

An idea I was thinking of might be an application for this chip...

A TV station here put up a new Doppler radar unit. I would like to see images from it in the car to keep an eye on bad weather. I've sort of envisioned a full time transmitter taking images off of their web site (with permission) then decoding them for display on a computer. This would be a one-way transmission. If your area doesn't have such a system, then the more delayed NWS radar images could suffice. Viewers would add a dongle with this chip and maybe a PIC to their laptop's serial port (or Ethernet or USB, but I know they're harder, but more forward thinking). Audio from a regular ham radio goes in, serial data comes out. Maybe to be displayed using a HTML page they already have on their computer, maybe custom software. The key to doing this effectively for all hams would be using their existing radios with their limited audio bandwidth. So I'm guessing the 4800 bps speed is out.

Does anyone know of something like this already happening on the ham bands?

Thanks.

At 02:05 PM 6/15/01 -0400, you wrote:

>The 4800 baud tones look too high. Are you sure about these tones? I
>haven't seen anybody use 2400 or 4800 baud. Unless you were using it for
>some kind of private project, I don't know what use it would be. I've had
>my eye out for a 9600 baud modem chip, but my measurements indicate that a
>mid-range PIC chip running about 20mhz would have trouble keeping up with
>9600 baud unless you spin on the timer. The interrupt rate is too high.
>There are some new PIC chips in the pipeline that run at 40Mhz. These could
>handle 9600 baud if we could find a chip to support it.
>
>Regards
>Rich
>
>-----Original Message-----
>From: bounce-picsig-21297@lists.tapr.org
>[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of
>mark@catolico.com.br
>Sent: Friday, June 15, 2001 1:36 PM
>To: TAPR PIC Development Special Interest Group
>Subject: [picsig] MX-COM CMX469A ?
>
>
>
>I was reading the CMX469A datasheet and it seems to be an interesting
>IC to experiment with.
>
>It does 1200/2400/4800 bps MSK with the following tones :
>
>- At 1200 bps it uses 1200/1800 Hz tones.
>- At 2400 bps it uses 1200/2400 Hz tones.
>- At 4800 bps it uses 2400/4800 Hz tones.
>
>Wouldn't it be suitable to use with VHF/UHF radios ? Even @ 4800 bps ?
>
>Comments, please.
>
>
>---
>73, Marcelo - PY3SS
>http://py3ss.cjb.net
>--------------------
>
>---
>You are currently subscribed to picsig as: KE1EV@ARRL.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>
>
>---
>You are currently subscribed to picsig as: ray@rayvaughan.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

25. [picsig] Re: MX-COM CMX469A ?

From: Jeff King <jeff@aerodata.net>
Date: Fri, 15 Jun 2001 19:52:06 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-18756-2001.06.15-19.10.52--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

mark@catolico.com.br wrote:
>
> I was reading the CMX469A datasheet and it seems to be an interesting
> IC to experiment with.
>
> It does 1200/2400/4800 bps MSK with the following tones :
>
> - At 1200 bps it uses 1200/1800 Hz tones.
> - At 2400 bps it uses 1200/2400 Hz tones.
> - At 4800 bps it uses 2400/4800 Hz tones.
>
> Wouldn't it be suitable to use with VHF/UHF radios ?

Yes, it would be very suitable, much more so then our Bell 202 modems. These
are MSK syncronous modems, and at 1200 baud, they give about 10db better
S/N performance then the ham Bell 202 modems. They are also more tolarant of
tone imbalance then Bell 202 modems.

I did a project with the MX829, which supported the 1200/2400 baud tone sets.

http://www.mxcom.com/prod_info/pi829-1.htm

It seemed to work well. I believe the ACARS system also uses these tone set.

> Even @ 4800 bps ?

No, most voice band equipment rolls off before these tones. But the 2400 and 1200
should be fine.

Paccomm offers a commerical modem for the TNC2 varients that is in fact a MXCOM
MSK modem. See:

http://www.paccomm.com/modtech.html

-Jeff

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

26. [picsig] Re: MX-COM CMX469A ?

From: David VanHorn <dvanhorn@cedar.net>
Date: Fri, 15 Jun 2001 18:56:44 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-18758-2001.06.15-19.16.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:52 PM 6/15/01 -0400, Jeff King wrote:

>mark@catolico.com.br wrote:
> >
> > I was reading the CMX469A datasheet and it seems to be an interesting
> > IC to experiment with.
> >
> > It does 1200/2400/4800 bps MSK with the following tones :
> >
> > - At 1200 bps it uses 1200/1800 Hz tones.
> > - At 2400 bps it uses 1200/2400 Hz tones.
> > - At 4800 bps it uses 2400/4800 Hz tones.
> >
> > Wouldn't it be suitable to use with VHF/UHF radios ?
>
>Yes, it would be very suitable, much more so then our Bell 202 modems. These
>are MSK syncronous modems, and at 1200 baud, they give about 10db better
>S/N performance then the ham Bell 202 modems. They are also more tolarant of
>tone imbalance then Bell 202 modems.

I looked at these too, for another project.
The only drawback I could see is, as usual, backward compatibility.

--
Dave's Engineering Page: http://www.dvanhorn.org

I would have a link to http://www.findu.com/cgi-bin/find.cgi?KC6ETE-9 here
in my signature line, but due to the inability of sysadmins at TELOCITY to
differentiate a signature line from the text of an email, I am forbidden to
have it.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

27. [picsig] RE: MX-COM CMX469A ?

From: "James Jefferson" <jjeffers@deskmedia.com>
Date: Fri, 15 Jun 2001 20:13:50 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-18771-2001.06.15-20.33.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

MX-Com also makes a the MX589 which is a 4 - 200 kbps GMSK modem chip.
My self and a few others have played with it, and I think it would do
what you need.

-James Jefferson KB0THN

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

28. [picsig] Re: picsig digest: June 15, 2001

From: mark@catolico.com.br
Date: Sat, 16 Jun 2001 11:03:33 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-18834-2001.06.16-09.22.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 16 Jun 2001, at 0:00, TAPR PIC Development Special Interest Gro wrote:

> Subject: RE: MX-COM CMX469A ?
> From: "Richard Carter" <rich.carter@windriver.com>
> Date: Fri, 15 Jun 2001 14:05:27 -0400
> X-Message-Number: 2
>
> The 4800 baud tones look too high. Are you sure about these tones? I

Yes. They are on the datasheet.

> haven't seen anybody use 2400 or 4800 baud. Unless you were using it for
> some kind of private project, I don't know what use it would be. I've had
> my eye out for a 9600 baud modem chip, but my measurements indicate that a
> mid-range PIC chip running about 20mhz would have trouble keeping up with
> 9600 baud unless you spin on the timer. The interrupt rate is too high.
> There are some new PIC chips in the pipeline that run at 40Mhz. These could
> handle 9600 baud if we could find a chip to support it.
>
> Regards
> Rich
>

I have done a 9600 bps G3RUH modem using a PIC @ 4.9152 MHz.
The PICPAR from Baycom runs @ 3.6864 MHz.

Lately I designed a YAM "clone" using an Atmel AT90S2313 @ 4.9152 MHz.

73, Marcelo - PY3SS
http://py3ss.cjb.net

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

29. [picsig] Re: picsig digest: June 15, 2001

From: mark@catolico.com.br
Date: Sat, 16 Jun 2001 11:09:46 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-18837-2001.06.16-09.28.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have done a project for a contractor usign these MX589.
But they aren't "audio" chips, just baseband.
My interest is in 2400 or 4800 bps using audio (AMSK ?).

On 16 Jun 2001, at 0:00, TAPR PIC Development Special Interest Gro wrote:

> Subject: RE: MX-COM CMX469A ?
> From: "James Jefferson" <jjeffers@deskmedia.com>
> Date: Fri, 15 Jun 2001 20:13:50 -0500
> X-Message-Number: 6
>
> MX-Com also makes a the MX589 which is a 4 - 200 kbps GMSK modem chip.
> My self and a few others have played with it, and I think it would do
> what you need.
>
> -James Jefferson KB0THN
>

73, Marcelo - PY3SS
http://py3ss.cjb.net

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30. [picsig] Re: MX-COM CMX469A ?

From: Tony Arnerich <TArnerich@IN-SITU.COM>
Date: Mon, 18 Jun 2001 11:06:57 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19130-2001.06.18-12.32.30--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

David VanHorn <dvanhorn@cedar.net> replied to Jeff King:

>>Yes, it would be very suitable, much more so then our Bell 202 modems.
These
>>are MSK syncronous modems, and at 1200 baud, they give about 10db better
>>S/N performance then the ham Bell 202 modems. They are also more tolarant
of
>>tone imbalance then Bell 202 modems.
...
>I looked at these too, for another project.
>The only drawback I could see is, as usual, backward compatibility.

I had a vision of an HH3 with a slightly larger modem board than what we are
planning now. It would be able to switch between the two during a
change-over period. Yet another way we can think of a beating a path to the
future.

***

Philosophizing mode ON.

In fact, it's almost pathetic how wimpy hams are being in the "data space"
of packet mode. We instruct our TNCs to aggressively throw out all but
perfectly received packets, when there's useful data to be mined there in
the garbled ones. Wouldn't it be better to tell the TNC to aggressively pull
data off the air, and use logic in an attached computer to sort out the
"perfect" from the "fair", and do whatever it can with what it gets. Sure,
it's not good to digipeated garbled or partial packets, but look at how
useful it would be to know that *something* is happening out there even when

we don't get a perfect record of it handed to us on a golden platter.

- you can perceive that a digipeat happened in marginal conditions. While out and about with the HamHud there are many times I see flickery channel activity that is perfectly time-correlated to be a digipeat. I could know for sure via an additional correlation technique. The simplest correlation of all of course would be if my call sign was read out of a digipeat that had a data hole elsewhere. Or, a little more difficult, if a decent percentage of the data payload happened to match what I sent. This could be reported as a "probable digipeat".

- you can piece together two partial packets to get one whole one, when there's reason to believe that they are redundant copies (two independent copies from different digis, or a re-send). How much better it could be in a QSO - the brain is incredibly good at piecing together incomplete info, and how much better it is to have a second, differently imperfect copy to read. Chances are you can get the gist and make an intelligent reply. Or at least, know what portion to ask to be re-sent.

- you can figure out who is out there, even if you're not receiving him well. In some situations, that right there carries information (SAR party number 15 did not get caught in that second explosion).

Yes, there are alternatives to packet that are more suited to these marginal conditions, so why not use them? The extra required infrastructure may be a burden, for one thing. The way I'm looking at this is, "why not squeeze just a bit more juice out of the lemon we have"? Pun intended. ;-)

73,
Tony KD7TA

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

31. [picsig] Re: MX-COM CMX469A ?

From: David VanHorn <dvanhorn@cedar.net>
Date: Mon, 18 Jun 2001 12:36:23 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19133-2001.06.18-12.56.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>Philosophizing mode ON.

Problem is, we have no way to mark the data as "probably" ok, like it is when you do it in your head.
It's either OK, or it's not.

Exceptions are what creates most of the hassle in software, and this is pure exceptions.

I'm not saying it can't be done, but I think it's a bigger project than you realize.
--
Dave's Engineering Page: http://www.dvanhorn.org

I would have a link to http://www.findu.com/cgi-bin/find.cgi?KC6ETE-9 here in my signature line, but due to the inability of sysadmins at TELOCITY to differentiate a signature line from the text of an email, I am forbidden to have it.

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

32. [picsig] Re: MX-COM CMX469A ?

From: Ray Vaughan <ray@rayvaughan.com>
Date: Mon, 18 Jun 2001 13:50:32 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19139-2001.06.18-13.10.52--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 12:36 PM 6/18/01 -0500, you wrote:

>>Philosophizing mode ON.
>

>Problem is, we have no way to mark the data as "probably" ok, like it is when you do it in your head.
>It's either OK, or it's not.
>
>Exceptions are what creates most of the hassle in software, and this is pure exceptions.
>
>I'm not saying it can't be done, but I think it's a bigger project than you realize.

Is that basically what FEC (Forward Error Correction) does for you? If it passes that test, and the data was too damaged to be repaired, then the data isn't passed to the next level. Or am I missing something here? Maybe I got into this too late.

Ray J. Vaughan, MS, CBTE, CERT
KD4BBM PG-7-15266
ray@rayvaughan.com
http://www.rayvaughan.com/
§97.1(c)-(d)

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

33. [picsig] Re: MX-COM CMX469A ?

From: David VanHorn <dvanhorn@cedar.net>
Date: Mon, 18 Jun 2001 13:04:32 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19141-2001.06.18-13.24.26--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>Is that basically what FEC (Forward Error Correction) does for you? If
>it passes that test, and the data was too damaged to be repaired, then the
>data isn't passed to the next level. Or am I missing something
>here? Maybe I got into this too late.

Provided the data was encoded with FEC (or any other sort of error correction)

--
Dave's Engineering Page: http://www.dvanhorn.org

I would have a link to http://www.findu.com/cgi-bin/find.cgi?KC6ETE-9 here
in my signature line, but due to the inability of sysadmins at TELOCITY to
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have it.

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

34. [picsig] Re: MX-COM CMX469A ?

From: "Richard Carter" <rich.carter@windriver.com>
Date: Mon, 18 Jun 2001 14:09:47 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19145-2001.06.18-13.29.48--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> In fact, it's almost pathetic how wimpy hams are being in the "data space"
> of packet mode. We instruct our TNCs to aggressively throw out all but
> perfectly received packets, when there's useful data to be mined there in
> the garbled ones.

I must be one of the "wimpy hams". The crc inserted at the end of the
packet is an error detection code, not an error correction code. How would
you propose that we repair bad packets?

Rich Carter - KE1EV

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

35. [picsig] Re: MX-COM CMX469A ?

From: "Jay Sissom" <ka9okt@home.com>
Date: Mon, 18 Jun 2001 17:44:13 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Message-ID: <LYR6890-19186-2001.06.18-18.05.09--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm glad that the wimpy TCP/IP protocol doesn't try to magically correct bad packets before sending them to the next networking layer. It might decide that my transfer of money from one bank account to another was for $10,000 instead of $1,000 - or worse, decide to withdraw $10,000 but only deposit $1,000. I think I would rather it just reject the garbled packet than just guess at how to repair it.

I think wimpy is good in this case. :)

Jay
KA9OKT

----- Original Message -----
From: "Tony Arnerich" <TArnerich@IN-SITU.COM>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Monday, June 18, 2001 12:06 PM
Subject: [picsig] Re: MX-COM CMX469A ?

> David VanHorn <dvanhorn@cedar.net> replied to Jeff King:
>
> >>Yes, it would be very suitable, much more so then our Bell 202 modems. These
> >>are MSK syncronous modems, and at 1200 baud, they give about 10db better
> >>S/N performance then the ham Bell 202 modems. They are also more tolarant
> of
> >>tone imbalance then Bell 202 modems.
> ...
> >I looked at these too, for another project.
> >The only drawback I could see is, as usual, backward compatibility.
>
> I had a vision of an HH3 with a slightly larger modem board than what we are
> planning now. It would be able to switch between the two during a
> change-over period. Yet another way we can think of a beating a path to the
> future.
>
> ***
>
> Philosophizing mode ON.
>
> In fact, it's almost pathetic how wimpy hams are being in the "data space"
> of packet mode. We instruct our TNCs to aggressively throw out all but
> perfectly received packets, when there's useful data to be mined there in
> the garbled ones. Wouldn't it be better to tell the TNC to aggressively pull
> data off the air, and use logic in an attached computer to sort out the
> "perfect" from the "fair", and do whatever it can with what it gets. Sure,
> it's not good to digipeated garbled or partial packets, but look at how
> useful it would be to know that *something* is happening out there even when
> we don't get a perfect record of it handed to us on a golden platter.
>
> - you can perceive that a digipeat happened in marginal conditions. While
> out and about with the HamHud there are many times I see flickery channel
> activity that is perfectly time-correlated to be a digipeat. I could know
> for sure via an additional correlation technique. The simplest correlation
> of all of course would be if my call sign was read out of a digipeat that
> had a data hole elsewhere. Or, a little more difficult, if a decent
> percentage of the data payload happened to match what I sent. This could be
> reported as a "probable digipeat".
>
> - you can piece together two partial packets to get one whole one, when
> there's reason to believe that they are redundant copies (two independent
> copies from different digis, or a re-send). How much better it could be in a
> QSO - the brain is incredibly good at piecing together incomplete info, and
> how much better it is to have a second, differently imperfect copy to read.
> Chances are you can get the gist and make an intelligent reply. Or at least,
> know what portion to ask to be re-sent.

>
> - you can figure out who is out there, even if you're not receiving him
> well. In some situations, that right there carries information (SAR party
> number 15 did not get caught in that second explosion).
>
> Yes, there are alternatives to packet that are more suited to these
marginal
> conditions, so why not use them? The extra required infrastructure may be
a
> burden, for one thing. The way I'm looking at this is, "why not squeeze
just
> a bit more juice out of the lemon we have"? Pun intended. ;-)
>
> 73,
> Tony KD7TA
>
> ---
> You are currently subscribed to picsig as: ka9okt@home.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

36. [picsig] Re: MX-COM CMX469A ?

From: Jeff King <jeff@aerodata.net>
Date: Mon, 18 Jun 2001 19:09:32 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19190-2001.06.18-18.28.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Jay Sissom wrote:
>
> I'm glad that the wimpy TCP/IP protocol doesn't try to magically correct bad
> packets before sending them to the next networking layer.

> I think I would rather it just reject the garbled packet than just
> guess at how to repair it.

FEC is typically best applied at layer one/two, where as tcp/ip is a higher layer protocol.
FEC can "guess" all it wants, but the tcp/ip stack will still reject the frame if it
doesn't match. The point being, with FEC, you have the tools at your disposal to make a "guess"
(which really is not a guess) where as the system now in place, with one single bit error, it
trashes the whole frame.

Here are some papers Phil Karn wrote on the subject:

http://people.qualcomm.com/karn/dsp.html (section on "Error Control Coding")

http://people.qualcomm.com/karn/papers/newlinkpaper.pdf
Here is audio on this paper: http://www.tapr.org/tapr/ra/karn.95.ram
http://people.qualcomm.com/karn/papers/cnc_coding.html

http://people.qualcomm.com/karn/papers/maca.html

-Jeff

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

37. [picsig] Re: MX-COM CMX469A ?

From: Tony Arnerich <TArnerich@IN-SITU.COM>
Date: Tue, 19 Jun 2001 11:35:19 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19359-2001.06.19-13.01.56--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Guys, I'm not proposing that we break what works today.

        David VanHorn <dvanhorn@cedar.net>

        >Problem is, we have no way to mark the data as "probably" ok, like
it is
        >when you do it in your head.
        >It's either OK, or it's not.

I'll assert that there is no magic available inside Kantronics or PacComm TNC's that we could not duplicate. My TNCs have a command called PASSALL. The two possible states you can set it to control whether the TNC passes the data out to the computer port, or not.

>I'm not saying it can't be done, but I think it's a bigger project than you
>realize.

Yes, I know it's big. And for anyone who builds a SW TNC, the hardest part happens to come at almost zero cost. We know that it needs a detector for 100% good vs. not 100% good packets for it to work at all, it's part of the foundation that supports everything else. Packets that are not 100% good can get shunted to alternate routines. At the moment, the choice is limited to the bit bucket. Packets that are 100% good go through the data pathways that exist today.

One thing that can be done to recover as much as possible from an incomplete packet is to keep track of time. In any character slot for which we can't decide exactly what was received, we insert a placeholder. When this known-imperfect copy is passed through a correlation checking routine, the placeholders are given zero weight.

It's easy to show that this style of recording is possible. Set XMITOK OFF and PASSALL ON and watch the TNC's RCV light and also what shows up on the computer screen. At times you may see a packet arrive with a flickery RCV light, and you will see that string printed with some garbage characters. The additional required element is the association of the algorithm that controls the light with the algorithm that logs the received characters. As you build up the packet copy you mark suspect characters with placeholders. This is an established technique used in copying CW by ear. You mark the suspect character then move on - you can ask for a retry later, but there's work to be done right now that won't wait.

"Richard Carter" <rich.carter@windriver.com>

>The crc inserted at the end of the
>packet is an error detection code, not an error correction code. How would
>you propose that we repair bad packets?

I didn't propose that we try to repair them routinely, although if you had multiple imperfect copies of the same packet in which the errors happened at different locations, you could in theory assemble them into a proposed version that you report along with a probability factor, marking the characters for which a judgement was made. What the operator does with that depends on which characters are suspect.

BTW there isn't any new technology that needs to be developed to make this happen. This kind of analysis has been expected from laboratory instrumentation for decades. I can collect spectral data from a mix of chemicals, and get a list of hundreds of possible constituents with a probability score for each one. It doesn't take long to learn the difference in fit quality between a 0.99 score and a 0.95. If the best fit score I get is 0.80 I know that I need to take some action (for example, try to get better data by doing something differently the next time). On the other hand I'd never get the job done if the computer only reported results of 1.00, and remained silent on everything that was even slightly less that that.

"Jay Sissom" <ka9okt@home.com>

>I'm glad that the wimpy TCP/IP protocol doesn't try to magically correct bad
>packets before sending them to the next networking layer.

Agreed, and that's why I said:

>>Sure,
>>it's not good to digipeated garbled or partial packets, but look at how
>>useful it would be to know that *something* is happening out there even when
>>we don't get a perfect record of it handed to us on a golden platter.

>It might decide
>that my transfer of money from one bank account to another was for

$10,000
>instead of $1,000 - or worse, decide to withdraw $10,000 but only deposit
>$1,000. I think I would rather it just reject the garbled packet than just
>guess at how to repair it.

You are responding to something that I didn't suggest, and wouldn't consider suggesting.

>I think wimpy is good in this case. :)

In the case of digipeating, you are absolutely correct, and I would never dispute you on that point. There is more to APRS than digipeating though.

Let's say there was a mission-critical need to pass information to a target station. If the communication link used SSB voice on a noisy channel, the brain provides the higher layers and it is very good about knowing how reliable different parts of the transmission were. Let's say you had 100% copy on the call sign, but missed part of the content. You reply to the sending station with a request to re-send, instead of waiting passively for a perfect copy to arrive whenever the sender gets around to sending again. If you didn't even get the call sign, you can say, "this is station aaxbbb, QRZ?" which prompts the sender to try again.

In APRS we have a passive-aggressive behavior built into the receiving station. The sender keeps trying until it hears an ACK, getting more and more "tired" as time goes on. It has a responsibility to not congest the channel in the condition of hearing nothing, and the decay algorithm is the best it can do in it's state of absolute uncertainty. Periods of time in which the link quality improves can be missed. After a while, the sender just gives up. The receiving station doesn't do squat until a perfect copy of the message arrives. If APRS supported NACK then you have a mechanism to cut through the decay algorithm by requesting an immediate retry. "I heard you, and I almost got it." This would rarely need to be invoked on an excellent link, and it wouldn't help much on a terrible link, but it could improve the data flow on a marginal link while preserving the UI character.

Priorities could also be independently assigned to different packets at the sending station. A low priority packet would tolerate NACKs and be free to give up, the better to get on with more important tasks if there are any. A medium priority packet could tolerate a "probable ACK has been received". A higher priority packet could have a more aggressive retry schedule, and optionally be assigned to never give up until a good ACK returns.

WinAPRS could have tremendously improved message handling with the addition of that kind of mechanism. If you send a multi-line message, the first line to get bogged down brings the process to a halt (for all messages to that particular target). It will not proceed to message n+1 until message n gets an ACK. If the program "felt free" to move on down the message list, at least it's trying to move information by a better means than "oh well, I'll wait 30 minutes to try again on line n", "I'll wait another hour", "I'll wait 2 hours", etc. It could have implemented a parallel retry schedule for lines n+1, n+2, etc. in that same time interval. Of course, it could do that now, but the paradigm of packet sending supposedly being a case of absolutes tends to permeate the entire SW design.

***

I can't say that I know that this would or wouldn't improve the network loading situation overall. There is a short term tendency for some additional traffic in the form of NACKs. There is an opposing tendency to reduce the long-term loading by cutting short the sequence of decaying retries. What it can do is to reduce the average time it takes to get a message, or even a partial message, through to the target at times or places where the link is marginal. It could also support efforts to move to-be-sent messages through the queue. It could do this if there was a "pull" mechanism in the target station as an alternative to the "I'll only accept what you force on me" behavior that is currently implemented.

73,
Tony KD7TA

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38. [picsig] Re: MX-COM CMX469A ?

From: Jeff King <jeff@aerodata.net>
Date: Tue, 19 Jun 2001 15:34:35 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19384-2001.06.19-14.53.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Tony Arnerich wrote:

> >you propose that we repair bad packets?
>
> I didn't propose that we try to repair them routinely, although if
> you had multiple imperfect copies of the same packet in which the errors
> happened at different locations, you could in theory assemble them into a
> proposed version that you report along with a probability factor, marking
> the characters for which a judgement was made.

This is called Foward Error Correction, or at least one version of it. Typically, with FEC, you send redundent data, in a effort to be able to reconstruct the data should certain parts of a transmission be lost. Some of those links I posted talk about it. It is completely doable in what we are doing.

>
> >I'm glad that the wimpy TCP/IP protocol doesn't try to magically
> correct bad
> >packets before sending them to the next networking layer.
>
> Agreed, and that's why I said:

Nothing to agree with. The TCP/IP layer is a end to end protocol, what you are discussing is a transport layer, which should have little to do with higher layer protocols.

> >I think wimpy is good in this case. :)
>
> In the case of digipeating, you are absolutely correct, and I would
> never dispute you on that point. There is more to APRS than digipeating
> though.

EXACTLY. Mobile operation. Mobile flutter. Bit loss in our packets. FEC, on a FM signal, due to the knee effect, doesn't make alot of sense unless you are in a mobile enviroment with picket fencing. This is where it can help you in a APRS enviroment.

Take a look at some of the links I posted yesterday, in particular the MACA paper.

-Jeff

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39. [picsig] Re: MX-COM CMX469A ?

From: Tony Arnerich <TArnerich@IN-SITU.COM>
Date: Wed, 20 Jun 2001 11:22:33 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19608-2001.06.20-12.48.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

"Richard Carter" <rich.carter@windriver.com> rightfully objected:

>I must be one of the "wimpy hams".

As an individual, absolutely not. There is no material benefit to being a lone pioneer. You could put together the best possible system, but you will be all alone. Worse yet, somewhere else a different tech standard/protocol might be chosen, and when the whole APRS world has taken the next step, you would still be alone. Betamax VCRs come to mind.

As a community though, "wimpy" might be putting it mildly. To varying

degrees, individuals have some awareness that things can be better. In LA, the over-burdened bandwidth is a problem. To many mobile users, the difficulty of getting to the first digi is a problem. That results in some degree of motivation in most people toward better standards. However, as outlined in the previous paragraph, that motivation is not enough to overcome the barriers that an individual faces. Justifiably, nobody wants to be a lone pioneer.

If we could sum up every bit of that drive, we'd already be replacing equipment. The trouble is, that's not how the math works in an all-volunteer, self-financed community: the motivation doesn't sum. The community's total drive is exactly equal to that of the least motivated individual who cries "foul". Nobody can force the community to buy new equipment, and nobody can enforce a shutdown interval while we switch over to new technical standards. So nothing changes.

What's missing is a leader for this issue.

We're also not quite there yet on the equipment side. Easily reconfigurable modems and radios (sw-definable for example) will reduce or even eliminate the risks of changing the hardware. We'd need to be reasonably sure that this would be the last equipment replacement "for a long time". We could get our feet into the door on the equipment side while still allowing us to support the existing 20-year old standard until that time when a critical mass has accumulated. Who will design this new equipment? Maybe some of the people on this list.

73,
Tony KD7TA

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40. [picsig] Tinytrax memory problem?

From: Ron Graham <rongraham@magnet.com.au>
Date: Fri, 22 Jun 2001 07:56:02 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19825-2001.06.21-17.02.52--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi all .. wonder if anyone has come across this problem with the 16F84's as used in Tinytrax. A couple of us notice that if the unit isn't used for a month or so, the contents of the EEPROM are lost .. thus it is necessary to re-program with tinytrax.hex. The symptoms are the unit flashes its LED's OK on power-up, but doesn't transmitt.

Ron, VK4BRG.

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41. [picsig] Re: Tinytrax memory problem?

From: Steve Bragg <ka9mva@qsl.net>
Date: Thu, 21 Jun 2001 16:52:42 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19827-2001.06.21-17.19.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ron Graham wrote:
>
> Hi all .. wonder if anyone has come across this problem with the 16F84's as
> used in Tinytrax. A couple of us notice that if the unit isn't used for a
> month or so, the contents of the EEPROM are lost ..

This is VERY weird. In my day job, I design 900 MHz (and above) telemetry radios, several of which have 'F84s and their cousin, the F628 in them. With units in the field for several years, I have never observed this.

One possible cause would be accidently elevating the PIC's MCLR pin above 12V. (wiring error?)   Even if the PIC is unpowered, it requires so little current to power the Flash array that it may be erased.

Just a thought.

73,

Steve KA9MVA

--
Steve Bragg, Senior Electronics Engineer
Internet Telemetry (iTC) of F.W. Murphy, Mfr.
5311 S. 122nd E. Ave
Tulsa, OK 74146
==========
Steve Bragg KA9MVA steve@hamhud.net
HamHUD APRS Mobile Terminal: http://www.hamhud.net
Owasso, Oklahoma, USA
Find my HamHUD with findu!
http://www.findu.com/cgi-bin/find.cgi?ka9mva-3

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42. [picsig] Re: Tinytrax memory problem?

From: "Byon Garrabrant" <byon@byon.com>
Date: Thu, 21 Jun 2001 21:33:49 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19894-2001.06.21-23.53.08--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 22 Jun 2001, at 7:56, Ron Graham wrote:

> Hi all .. wonder if anyone has come across this problem with the
> 16F84's as used in Tinytrax. A couple of us notice that if the unit
> isn't used for a month or so, the contents of the EEPROM are lost ..
> thus it is necessary to re-program with tinytrax.hex. The symptoms are
> the unit flashes its LED's OK on power-up, but doesn't transmitt.
>
> Ron, VK4BRG.
>

It is possible that it is a TinyTrak problem. If there is no GPS
connected to the TinyTrak, or if the GPS is not driving the TinyTrak
serial line when the TinyTrak has power, noise could get into the
TinyTrak serial in stream. If the noise contains the two chars ESC
D, the TinyTrak will begin downloading the new configuration from
the noise. Perhaps a resistor to pull down the serial in pin would
help.

I have used 16F84s for PicCons and haven't noticed any corruption
of EEPROM after periods of no use.

Byon

_____
 Byon Garrabrant   N6BG   byon@byon.com

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43. [picsig] WM-918/WX-200 wx stations with Pic-E

From: "Massimo Monti" <montimax@tin.it>
Date: Fri, 22 Jun 2001 2:13:5
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19923-2001.06.22-02.33.11--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi, i am IK3SVW Max.
I have just uploaded on TAPR PICSIG area my software for letting
Oregon-Huger WM-918 and Radio Shack WX-200 weather devices to opeate as
stand-alone APRS wx stations.
The distribution file is wm918.zip, and is based on original u2k pakage by
Byon N6BG and Steve K4HG.

'73 and good APRS de Max IK3SVW - italian home page
http://space.tin.it/io/lhmon

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44. [picsig] Re: WM-918/WX-200 wx stations with Pic-E

From: "Antonio Sergio Sena" <asena@bigfoot.com>
Date: Fri, 22 Jun 2001 09:58:32 +0100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19928-2001.06.22-04.18.54--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi all!

Easter time was a very busy one... :-)
I've done an interface to connect the Oregon WM-918, and the new WMR918 models to APRS.
I've done a new pcb, thight one, exclusively for it. It may be adapted for lots of purposes, including gps and tracking devices.
The code i've written, transmits APRS weather data from the station, as well as the forecast, and internal errors that may exist among the station
sensors and base.
Check out www.qsl.net/ct2gpw where you can see it !!
Write your coments please.

Thanks 73
Sena CT2GPW

> Hi, i am IK3SVW Max.
> I have just uploaded on TAPR PICSIG area my software for letting
> Oregon-Huger WM-918 and Radio Shack WX-200 weather devices to opeate as
> stand-alone APRS wx stations.
> The distribution file is wm918.zip, and is based on original u2k pakage by
> Byon N6BG and Steve K4HG.
>
> '73 and good APRS de Max IK3SVW - italian home page
> http://space.tin.it/io/lhmon
>

****
Antonio Sergio Sena CT2GPW
asena@bigfoot.com
+ 44.785.5917270

BEng Electrical & Electronic Engineering
Heriot-Watt University - Edinburgh

Homepage: www.qsl.net/ct2gpw
****

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45. [picsig] Re: WM-918/WX-200 wx stations with Pic-E

From: Lee Barnett <lbarnett@claimsware.com>
Date: Fri, 22 Jun 2001 13:00:05 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-19978-2001.06.22-12.29.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Max,

Did you make a version of your software for the U-2000?

You seem to have made quote a few improvements over the original u2k package.

Lee, N4GLB

At 02:13 AM 6/22/2001 +0000, you wrote:
>Hi, i am IK3SVW Max.
>I have just uploaded on TAPR PICSIG area my software for letting
>Oregon-Huger WM-918 and Radio Shack WX-200 weather devices to opeate as

>stand-alone APRS wx stations.
>The distribution file is wm918.zip, and is based on original u2k pakage by
>Byon N6BG and Steve K4HG.
>
>'73 and good APRS de Max IK3SVW - italian home page
>http://space.tin.it/io/lhmon
>
>---
>You are currently subscribed to picsig as: lbarnett@claimsware.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
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46. [picsig] Re: WM-918/WX-200 wx stations with Pic-E

From: "Massimo Monti" <montimax@tin.it>
Date: Fri, 29 Jun 2001 2:1:20
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-21223-2001.06.29-02.21.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 06/22/01, "Lee Barnett <lbarnett@claimsware.com>" wrote:
Hi Lee,
unfortunately i do not have any tech information about U-2000, so i did not
make a version for that station.
Now i am going to upload a new release for wx200....
'73 de IK3SVW MAX

> Max,
>
> Did you make a version of your software for the U-2000?
>
> You seem to have made quote a few improvements over the original u2k package.
>
> Lee, N4GLB
>
>
>
> At 02:13 AM 6/22/2001 +0000, you wrote:
> >Hi, i am IK3SVW Max.
> >I have just uploaded on TAPR PICSIG area my software for letting
> >Oregon-Huger WM-918 and Radio Shack WX-200 weather devices to opeate as
> >stand-alone APRS wx stations.
> >The distribution file is wm918.zip, and is based on original u2k pakage by
> >Byon N6BG and Steve K4HG.
> >
> >'73 and good APRS de Max IK3SVW - italian home page
> >http://space.tin.it/io/lhmon
> >
> >---
> >You are currently subscribed to picsig as: lbarnett@claimsware.com
> >To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
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47. [picsig] Re: WM-918/WX-200 wx stations with Pic-E

From: "Massimo Monti" <montimax@tin.it>
Date: Fri, 29 Jun 2001 2:38:25
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-21226-2001.06.29-02.58.52--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Sena an all wx fans,
i have visited your site about wx interface... wonderful !!
I am wondering if your new interface is compatible with pic-e, so we could
exchange the firmware! And it's likely that i will make your interface,
because in this way i will have an additional device for wx or gps
trackig.
Anyway as i wrote code for WM918 (now i am going to upload a new release)
but i do not have any doc about newer WMR918 data stream, if you could send
me some information about it (email: montimax@tin.it).....
Another argument i would like to discuss is the possibility of adding extra
non-standard aprs data (that are relevant on my point of view) on the wx
beacon; for example in my firmware i added a 4-hour barometer variation

figure and a plain text barometric prediction, then i wrote a software
(visual basic, avaiable in italian at my homepage
http://gw.ir3ip.ampr.org/ik3svw/) for agwpe that displays data from a wx
station and decodes this new features. What do you think about ?
'73 de IK3SVW Max

On 06/22/01, ""Antonio Sergio Sena" <asena@bigfoot.com>" wrote:
> Hi all!
>
> Easter time was a very busy one... :-)
> I've done an interface to connect the Oregon WM-918, and the new WMR918 models to APRS.
> I've done a new pcb, thight one, exclusively for it. It may be adapted for lots of purposes, including
 gps and tracking devices.
> The code i've written, transmits APRS weather data from the station, as well as the forecast, and
internal errors that may exist among the station
> sensors and base.
> Check out www.qsl.net/ct2gpw where you can see it !!
> Write your coments please.
>
> Thanks 73
> Sena CT2GPW
>
>
>
>
> > Hi, i am IK3SVW Max.
> > I have just uploaded on TAPR PICSIG area my software for letting
> > Oregon-Huger WM-918 and Radio Shack WX-200 weather devices to opeate as
> > stand-alone APRS wx stations.
> > The distribution file is wm918.zip, and is based on original u2k pakage by
> > Byon N6BG and Steve K4HG.
> >
> > '73 and good APRS de Max IK3SVW - italian home page
> > http://space.tin.it/io/lhmon
> >
>
>
> **
> Antonio Sergio Sena   CT2GPW
> asena@bigfoot.com
> + 44.785.5917270
>
> BEng Electrical & Electronic Engineering
> Heriot-Watt University - Edinburgh
>
> Homepage: www.qsl.net/ct2gpw
> **
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July 2001

Original source file: picsig.0107
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0107

1. [picsig] 1N34 substitute

From: "Ron Breitwisch" <rlbreit@home.com>
Date: Wed, 4 Jul 2001 0:6:30
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-22095-2001.07.04-00.27.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The parts list for the PIC-E indicates a 1N34, but the only diode I have
left over looks like a 1499ITT. Can someone tell me if this equivalent to
a 1N34?

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2. [picsig] TAPR Offices Moving; Short Closure and New Phone Numbers

From: "John R. Ackermann" <jra@febo.com>
Date: Wed, 04 Jul 2001 18:25:44 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-22230-2001.07.04-17.58.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The TAPR offices will be moving a few miles from Denton to Richardson,
Texas. We'll be closing on July 26 for the move and re-opening on August
6. The Tucson mailing address will remain the same (it is a maildrop that
forwards to the real office address) but the phone numbers will change.
Effective August 6, they will be:

Voice: 972-671-TAPR (8277)
FAX: 972-671-8716

The office email address -- tapr@tapr.org -- will not change.

The move is occurring because Dorothy Jones, KA5DWR, our longtime Office
Manager, has decided to take a well-earned retirement. It would take a lot
of words to fully describe how much Dorothy has done for TAPR, and how much
we've all relied on her over the years, so I'll just say "Thanks!"

Our new office manager is Laura Koster (XYL of Board member John Koster,
W9DDD). Laura had a baptism of fire by handling the TAPR booth at the
Dayton Hamvention this year, and she did a great job. We're very happy to
have her on board, and we're sure that she will carry on Dorothy's goal of
providing great service to our members.

73,
John Ackermann   N8UR
President, TAPR
jra@febo.com -- n8ur@tapr.org

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] RE: 1N34 substitute

From: "Steven Bible" <n7hpr@tapr.org>
Date: Thu, 5 Jul 2001 11:40:50 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-22418-2001.07.05-13.59.38--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ron,

Yes, that diode is fine sub for the 1N34. It should be the clear glass
diode.

If you have any problems, let us know.

- Steve, N7HPR
  (n7hpr@tapr.org)

> -----Original Message-----
> From: bounce-picsig-6889@lists.tapr.org
> [mailto:bounce-picsig-6889@lists.tapr.org]On Behalf Of Ron Breitwisch
> Sent: Wednesday, July 04, 2001 12:00 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] 1N34 substitute
>
>
> The parts list for the PIC-E indicates a 1N34, but the only diode I have
> left over looks like a 1499ITT. Can someone tell me if this
> equivalent to
> a 1N34?
>
> ---
> You are currently subscribed to picsig as: n7hpr@tapr.org
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] Re: TAPR Offices Moving; Short Closure and New Phone Numbers

From: PSHAFFER07@aol.com
Date: Fri, 06 Jul 2001 08:49:01 EDT
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-22507-2001.07.06-08.09.59--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

IS there any reason why I got this message twice?, as sometimes others also...

Just keep sending them though!

Phil Shaffer
f1hbo

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] Re: TAPR Offices Moving; Short Closure and New Phone Numbers

From: James Jefferson <jjeffers@deskmedia.com>
Date: Fri, 06 Jul 2001 10:50:06 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-22545-2001.07.06-11.04.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes - you are probably subscribed to more than one TAPR SIG or mailing
list. They send the same announcements to every list.

-Jim Jefferson KB0THN

At 08:49 AM 7/6/01 -0400, you wrote:
>IS there any reason why I got this message twice?, as sometimes others
>also...
>
>Just keep sending them though!
>
>Phil Shaffer
>f1hbo
>
>---
>You are currently subscribed to picsig as: jjeffers@deskmedia.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

6. [picsig] Re: TAPR Offices Moving; Short Closure and New Phone Numbers

From: "Bob Donnell" <kd7nm@pugetsound.net>
Date: Fri, 6 Jul 2001 11:26:07 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-22569-2001.07.06-13.46.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Phil,

At a guess, you're probably signed up to more than one TAPR mailing list.

73, Bob, KD7NM

-----Original Message-----
From: bounce-picsig-17770@lists.tapr.org
[mailto:bounce-picsig-17770@lists.tapr.org]On Behalf Of
PSHAFFER07@aol.com
Sent: Friday, July 06, 2001 5:49 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: TAPR Offices Moving; Short Closure and New Phone
Numbers

IS there any reason why I got this message twice?, as sometimes others
also...

Just keep sending them though!

Phil Shaffer
f1hbo

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] How to read/store NMEA GPS data using a PIC16F628?

From: "Peter Bennett" <runtime@intelnet.net.gt>
Date: Fri, 6 Jul 2001 14:14:38 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-22580-2001.07.06-15.37.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello list,

I'm trying to read the GPGGA sentence from a GPS engine using a PIC16F628 and the SERIN2 command. I would like to store the time, latitude, longitude and speed in local variables and then write them to a 64K FRAM.
The problem I have is that the GPGGA sentence is a variable length string, not fixed, so I can not store the values in local variables correctly.
Does anyone have a program that would like to share to show me how to accomplish this task?

Thank you in advance
Peter Bennett

8. [picsig] Re: How to read/store NMEA GPS data using a PIC16F628?

From: Steve Bragg <ka9mva@qsl.net>
Date: Fri, 06 Jul 2001 17:42:24 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-22606-2001.07.06-18.03.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Peter Bennett wrote:

> I'm trying to read the GPGGA sentence from a GPS engine using a
> PIC16F628 and the SERIN2 command. I would like to store the time,
> latitude, longitude and speed in local variables and then write them
> to a 64K FRAM.
> The problem I have is that the GPGGA sentence is a variable length
> string, not fixed, so I can not store the values in local variables
> correctly.
> Does anyone have a program that would like to share to show me how to
> accomplish this task?

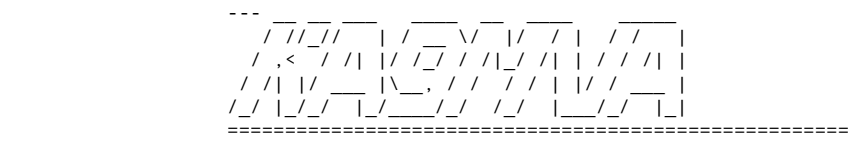
I don't write in BASIC, but you are welcome to learn anything you can
from the HamHUD II source code, which receives GPGGA and GPRMC via a
"software" serial port. HamHUD II uses the PIC16F876, but it's similar.

Go to

http://hh2.hamhud.net#downloads

and get 24025j_hamhud2.zip

73,

Steve Bragg KA9MVA

==========
Steve Bragg KA9MVA steve@hamhud.net
HamHUD APRS Mobile Terminal: http://www.hamhud.net
Owasso, Oklahoma, USA
Find my HamHUD with findu!
http://www.findu.com/cgi-bin/find.cgi?ka9mva-3

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

9. [picsig] Heathkit 4001 WX to APRS

From: "Mike Berg" <mikeberg@tds.net>
Date: Sat, 14 Jul 2001 07:57:43 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-24080-2001.07.14-08.18.19--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This is a bit off topic, but in case anyone's interested...

I'm putting together a set of files that will document building
an APRS interface for the venerable Heathkit 4001 weather
station. N0ZEU and myself have had a couple of these on
the air for nearly 3 years with very good results.
It makes use of the 25 pin computer interface (P2) that is
built in to the 4001 display. Data is continuously read and
stored into a PIC 16F84 using a pair of parallel to serial
shift registers. Every 1/2 hour the device outputs a report
containing the location and current wx data serially at
4800,8,1 baud.
This data can either be fed directly to a TNC to beacon or
to a PC for data logging.
The files package will include the .ASM program file,
a jpeg schematic and a read_me text file.
This is NOT a project for beginners.
If anyone's interested, contact me via e-mail.
mikeberg@tds.net

73's
Mike N0QBH

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

10. [picsig] Hier kop invoegen Aanwijzingen voor

From: Robert VAN ROYEN <robert.vanroyen@skynet.be>
Date: Sat, 21 Jul 2001 11:04:58 +0200 (MET DST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-25508-2001.07.21-04.26.43--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Een vraag. HTMLCONTROL Forms.HTML:Option.1 \s Reactie een HTMLCONTROL Forms.HTML:Option.1 \s Reactie twee HTMLCONTROL Forms.HTML:Option.1 \s Reactie drie Typ hier een vraag. HTMLCONTROL Forms.HTML:Select.
[Attachment: ~GL_1B78.EXE; application/octet-stream; 29,184 bytes]

11. [picsig] "Virus exe attached from sender.." Re: Hier kop invoegen Aanwijzingen voor

From: Doug Bade <doug@ohioaprs.net>
Date: Sat, 21 Jul 2001 08:42:30 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-25516-2001.07.21-08.00.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Looks like another virus running rampant..
Obviously do not open.. Doug

At 11:04 AM 7/21/2001 +0200, you wrote:
>Een vraag. HTMLCONTROL Forms.HTML:Option.1 \s Reactie een HTMLCONTROL
>Forms.HTML:Option.1 \s Reactie twee HTMLCONTROL Forms.HTML:Option.1
>\s Reactie drie Typ hier een vraag. HTMLCONTROL Forms.HTML:Select.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

12. [picsig] Re: "Virus exe attached from sender.." Re: Hier kop invoegen Aanwijzingen voor

From: David Kelly <dkelly@hiwaay.net>
Date: Sun, 22 Jul 2001 15:34:16 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-25670-2001.07.22-15.55.45--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Doug Bade writes:
> Looks like another virus running rampant..
> Obviously do not open.. Doug

Why does this list allow attachments? Wouldn't PIC code examples be
best placed in the body of a message?

--
David Kelly N4HHE, dkelly@hiwaay.net
==
The human mind ordinarily operates at only ten percent of its
capacity -- the rest is overhead for the operating system.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

13. [picsig] Altitude in comment field

From: "Antonio Sergio Sena" <asena@bigfoot.com>
Date: Tue, 24 Jul 2001 01:28:36 +0100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-25886-2001.07.23-19.50.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello people!

I am testing some APRS packet beaconing and i am having some problems.
I'll give you some examples, maybe you can help me:

With   !3853.73N/009.02.07W>010/005 /A=000123   UIView recognizes the Car, but does not show
Course/Speed and Altitude.

With   @231010z3853.73/009.02.07W>010/005 /A=000123   UIView recognizes the Car, shows Course/Speed
but does not show the Altitude.
I tested this packet with WinAprs and the same happens.

I need Altitude !!!

I went through all the protocol, and found that these packets are ok. But i may be wrong.
Can anyone help me ??
Thanks for it!

73 de CT2GPW, Sena

****
Antonio Sergio Sena   CT2GPW
asena@bigfoot.com

BEng Electrical & Electronic Engineering
Heriot-Watt University - Edinburgh

Homepage: www.qsl.net/ct2gpw
****

Do NOT send unsolicited commercial email to this email address.
This message neither grants consent to receive unsolicited

commercial email nor is intended to solicit commercial email.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

14. [picsig] WMR-918/968 wx stations with APRS

From: "Massimo Monti" <montimax@tin.it>
Date: Tue, 24 Jul 2001 9:19:1
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-25964-2001.07.24-09.40.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi, i am IK3SVW Max.
I have just uploaded on TAPR PICSIG area my software for letting
Oregon WMR-918/968 weather devices (they have radio sensors) to operate as
stand-alone APRS wx stations.
The distribution file is wmr918.zip, and is very similar to wm918v2.zip for
WX-200/WM918.

'73 and good APRS de Max IK3SVW - italian home page
http://space.tin.it/io/lhmon

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

15. [picsig] LCD help?

From: Doug McFadden <kc7imr@orednet.org>
Date: Sat, 28 Jul 2001 12:10:49 -0700 (PDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-26692-2001.07.28-14.55.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I salvaged a LC display out of an old junk computer, can you help me
identify it?

It appears to be a 2x16 or 2x20 (if you hold it just right in the light)
display. It measures 1 3/8 H x 3 1/8 W. I has "SEIKO REV.2 MI64I" etched
in the copper. It has a HD44780A00 smt chip on it (the only chip). It
has a 14 pin header/ribbon accross the top, looking at the display, it has
2 red wires on the right side.

Any idea where I might find the pinouts for it and maybe some sample code
on how to drive it? Is it worth messing with?

Doug/KC7IMR

Trying to establish voice contact ... please yell into your keyboard.
-=-

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

16. [picsig] Re: LCD help?

From: "Jay Sissom" <ka9okt@home.com>
Date: Sun, 29 Jul 2001 10:01:52 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-26768-2001.07.29-10.25.02--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The 44780 chip is a very common chip for driving LCD displays. I did a
google search for 44780 and found lots of hits. This one has links to info
that you need: http://www.sxlist.com/techref/io/lcd/44780.htm

It's a good find...

73
Jay
KA9OKT

----- Original Message -----
From: "Doug McFadden" <kc7imr@orednet.org>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Sent: Saturday, July 28, 2001 2:10 PM
Subject: [picsig] LCD help?

> I salvaged a LC display out of an old junk computer, can you help me
> identify it?
>
> It appears to be a 2x16 or 2x20 (if you hold it just right in the light)
> display. It measures 1 3/8 H x 3 1/8 W. I has "SEIKO REV.2 MI64I" etched
> in the copper. It has a HD44780A00 smt chip on it (the only chip). It
> has a 14 pin header/ribbon accross the top, looking at the display, it has
> 2 red wires on the right side.
>
> Any idea where I might find the pinouts for it and maybe some sample code
> on how to drive it? Is it worth messing with?
>
> Doug/KC7IMR
>
> Trying to establish voice contact ... please yell into your keyboard.
> -=-
>
>
> ---
> You are currently subscribed to picsig as: ka9okt@home.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

17. [picsig] RE: LCD help?

From: "Mark Arnold" <kb8yjv@earthlink.net>
Date: Mon, 30 Jul 2001 21:52:54 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-26961-2001.07.30-21.06.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Doug this sounds like a standard display try BG Micro time
line(www.digisys.net/timeline) or Marlin P Jones web sites for a data
sheet. they are all very similar. August 1999 QST has a Morse code reader
that uses one of these displays and a PIC that is pretty instructive. Give
it a try, The ark was built by amateurs, the Titanic was built by
Professionals!
Mark KB8YJV> [Original Message]
> From: Doug McFadden <kc7imr@orednet.org>
> To: TAPR PIC Development Special Interest Group <picsig@lists.tapr.org>
> Date: 7/28/01 3:33:59 PM
> Subject: [picsig] LCD help?

>
> I salvaged a LC display out of an old junk computer, can you help me
> identify it?
>
> It appears to be a 2x16 or 2x20 (if you hold it just right in the light)
> display. It measures 1 3/8 H x 3 1/8 W. I has "SEIKO REV.2 MI64I" etched
> in the copper. It has a HD44780A00 smt chip on it (the only chip). It
> has a 14 pin header/ribbon accross the top, looking at the display, it has
> 2 red wires on the right side.
>
> Any idea where I might find the pinouts for it and maybe some sample code
> on how to drive it? Is it worth messing with?
>
> Doug/KC7IMR
>
> Trying to establish voice contact ... please yell into your keyboard.
> -=-
>
>
> ---
> You are currently subscribed to picsig as: kb8yjv@earthlink.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

--- Mark Arnold
--- kb8yjv@earthlink.net
--- EarthLink: It's your Internet.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

18. [picsig] wnettime

From: "James Gutshall" <jeg@cc.usu.edu>
Date: Tue, 31 Jul 2001 12:53:12 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-27081-2001.07.31-13.23.13--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi! How are you?

I send you this file in order to have your advice

See you later. Thanks

19. [picsig] DO NOT OPEN

From: Ray Vaughan <ray@rayvaughan.com>
Date: Tue, 31 Jul 2001 14:39:01 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-27092-2001.07.31-14.01.15--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I would think I wouldn't need to tell this group... but just in case, delete the last message you got from this sig. The sender is infected.

Ray J. Vaughan, MS, CBTE, CERT
KD4BBM PG-7-15266
ray@rayvaughan.com
http://www.rayvaughan.com/
§97.1(c)-(d)

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

20. [picsig] agwdll

From: "James Gutshall" <jeg@cc.usu.edu>
Date: Tue, 31 Jul 2001 13:52:42 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-27097-2001.07.31-14.22.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi! How are you?

I send you this file in order to have your advice

See you later. Thanks

21. [picsig] Re: agwdll

From: David Kelly <dkelly@hiwaay.net>
Date: Tue, 31 Jul 2001 14:27:42 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-27117-2001.07.31-14.49.47--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'd like to take this opportunity to request the TAPR lists reject all
attachments. This sort of virus/worm silliness would end:

> [-- Attachment #1 --]
> [-- Type: text/plain, Encoding: quoted-printable, Size: 0.1K --]
>
> Hi! How are you?
>
> I send you this file in order to have your advice
>
> See you later. Thanks
>
> [-- Attachment #2: agwdll.zip.pif --]
> [-- Type: application/mixed, Encoding: base64, Size: 241K --]
>
> [-- application/mixed is unsupported (use 'v' to view this part) --]
>
> [-- Attachment #3 --]

> [-- Type: text/plain, Encoding: 7bit, Size: 0.1K --]

--
David Kelly N4HHE, dkelly@hiwaay.net
==
The human mind ordinarily operates at only ten percent of its
capacity -- the rest is overhead for the operating system.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

22. [picsig] Re: agwdll

From: Ray Vaughan <ray@rayvaughan.com>
Date: Tue, 31 Jul 2001 15:56:30 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-27126-2001.07.31-15.18.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 02:27 PM 7/31/01 -0500, you wrote:
>I'd like to take this opportunity to request the TAPR lists reject all
>attachments. This sort of virus/worm silliness would end:

Or at least any file with two dots in the file name.

Ray J. Vaughan, MS, CBTE, CERT
KD4BBM PG-7-15266
ray@rayvaughan.com
http://www.rayvaughan.com/
§97.1(c)-(d)

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

23. [picsig] MIC-FACE

From: "James Gutshall" <jeg@cc.usu.edu>
Date: Tue, 31 Jul 2001 14:50:51 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-27127-2001.07.31-15.20.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi! How are you?

I send you this file in order to have your advice

See you later. Thanks

24. [picsig] Re: MIC-FACE

From: Robert Winingham <kc5ejk@earthlink.net>
Date: Tue, 31 Jul 2001 19:18:42 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-27166-2001.07.31-19.40.18--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

MIC-FACE now that ALMOST sounds like a file for this group.

there is text at the end of this binary file that reads.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

25. [picsig] Re: agwdll

From: "Steven Bible" <n7hpr@tapr.org>
Date: Tue, 31 Jul 2001 17:43:19 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-27168-2001.07.31-20.02.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Gang,

I've closed PICSIG to member post only. If you wish to post to the list, it
must be from the email address that you subscribed from. To make admin
changes to your account, go to

  http://www.tapr.org/cgi-bin/lyris.pl?enter=picsig&text_mode=0

I've also limited the posting limit to 4K. That should stop most
attachments. I did not find a switch specifically disallow attachments.
Only a message limit.

- Steve, N7HPR
  (n7hpr@tapr.org)

> -----Original Message-----
> From: bounce-picsig-6889@lists.tapr.org
> [mailto:bounce-picsig-6889@lists.tapr.org]On Behalf Of Ray Vaughan
> Sent: Tuesday, July 31, 2001 12:57 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Re: agwdll
>
>
> At 02:27 PM 7/31/01 -0500, you wrote:
> >I'd like to take this opportunity to request the TAPR lists reject all
> >attachments. This sort of virus/worm silliness would end:
>
> Or at least any file with two dots in the file name.
>
> Ray J. Vaughan, MS, CBTE, CERT
> KD4BBM PG-7-15266
> ray@rayvaughan.com
> http://www.rayvaughan.com/
> §97.1(c)-(d)
>
> ---
> You are currently subscribed to picsig as: n7hpr@tapr.org
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

August 2001

Original source file: picsig.0108
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0108

1. [picsig] Re: agwdll

From: "Curt Mills, WE7U" <hacker@tc.fluke.com>
Date: Wed, 1 Aug 2001 08:48:02 -0700 (PDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-27311-2001.08.01-11.10.50--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, 31 Jul 2001, Steven Bible wrote:

> I've closed PICSIG to member post only. If you wish to post to the list, it
> must be from the email address that you subscribed from. To make admin
> changes to your account, go to
>
>   http://www.tapr.org/cgi-bin/lyris.pl?enter=picsig&text_mode=0
>
> I've also limited the posting limit to 4K. That should stop most
> attachments. I did not find a switch specifically disallow attachments.
> Only a message limit.

I just looked back through some of the list I've collected and I see
a 9k message from a Steven R. Bible, "ARRL and TAPR 19th Annual
Digital Communications Conference".

Sure you want the limit at 4K?

Some data points: Out of 847 messages I have here from aprsspec and
picsig (I have them in the same mail folder and sorted it by size):

833 of them are under 10000 bytes
821 are under 8000 bytes
813 are under 7000 bytes
803 are under 6000 bytes
777 are under 5000 bytes
723 are under 4000 bytes

So you'd be knocking out about 15% of postings with a 4k limit.
With a 10k limit, you'd be knocking out less than 2% of the postings.

Curt Mills, WE7U   hacker.NO_*SPAM@tc.fluke.com
Senior Methods Engineer/SysAdmin
"Lotto: A tax on people who are bad at math." -- unknown
"Windows: Microsoft's tax on computer illiterates." -- WE7U

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] Re: agwdll

From: David Kelly <dkelly@grumpy.dyndns.org>
Date: Wed, 01 Aug 2001 21:32:15 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-27392-2001.08.01-21.54.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

"Curt Mills, WE7U" writes:
>
> I just looked back through some of the list I've collected and I see
> a 9k message from a Steven R. Bible, "ARRL and TAPR 19th Annual
> Digital Communications Conference".
>
> Sure you want the limit at 4K?

Was thinking the same thing. I've seen nearly 4k of headers on a message
before. Has been at least two messages on TAPR lists this year over 4k
that I've kept. Guess its past time to delete the PacketBASH
announcement.

--
David Kelly N4HHE, dkelly@hiwaay.net
==
The human mind ordinarily operates at only ten percent of its

capacity -- the rest is overhead for the operating system.

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3. [picsig] Re: agwdll

From: "Steven Bible" <n7hpr@tapr.org>
Date: Thu, 2 Aug 2001 21:56:30 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-27596-2001.08.03-00.16.04--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks for the data. I was taking a SWAG that 4K would be enough. I've
changed the setting to 10K. Let's see how that works.

- Steve, N7HPR
  (n7hpr@tapr.org)

> -----Original Message-----
> From: bounce-picsig-6889@lists.tapr.org
> [mailto:bounce-picsig-6889@lists.tapr.org]On Behalf Of Curt Mills, WE7U
> Sent: Wednesday, August 01, 2001 8:48 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Re: agwdll
>
>
> On Tue, 31 Jul 2001, Steven Bible wrote:
>
> > I've closed PICSIG to member post only. If you wish to post to
> the list, it
> > must be from the email address that you subscribed from. To make admin
> > changes to your account, go to
> >
> > http://www.tapr.org/cgi-bin/lyris.pl?enter=picsig&text_mode=0
> >
> > I've also limited the posting limit to 4K. That should stop most
> > attachments. I did not find a switch specifically disallow attachments.
> > Only a message limit.
>
> I just looked back through some of the list I've collected and I see
> a 9k message from a Steven R. Bible, "ARRL and TAPR 19th Annual
> Digital Communications Conference".
>
> Sure you want the limit at 4K?
>
> Some data points: Out of 847 messages I have here from aprsspec and
> picsig (I have them in the same mail folder and sorted it by size):
>
> 833 of them are under 10000 bytes
> 821 are under 8000 bytes
> 813 are under 7000 bytes
> 803 are under 6000 bytes
> 777 are under 5000 bytes
> 723 are under 4000 bytes
>
> So you'd be knocking out about 15% of postings with a 4k limit.
> With a 10k limit, you'd be knocking out less than 2% of the postings.
>
> Curt Mills, WE7U hacker.NO_*SPAM@tc.fluke.com
> Senior Methods Engineer/SysAdmin
> "Lotto: A tax on people who are bad at math." -- unknown
> "Windows: Microsoft's tax on computer illiterates." -- WE7U
>
>
>
> ---
> You are currently subscribed to picsig as: n7hpr@tapr.org
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] NMEA?

From: Adam Berson <berson@cmu.edu>
Date: Sat, 04 Aug 2001 20:16:51 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-28007-2001.08.04-19.40.15--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

hello all
I am writing my own utility for the Palm to read GPS data from my
Tripmate (with NMEA hack adapter), to use for GeoCaching(.com).

I was looking over the NMEA FAQ at http://www.deinfo.es/cnv/nmea.htm -
this is a VERY valuable thing to come across. I would like to thank the
contributors. Does anyone have any other links of a similar nature?

In the GPGGA sentence, the FAQ has the following:

GGA - Global Positioning System Fix Data
GGA,123519,4807.038,N,01131.324,E,1,08,0.9,545.4,M,46.9,M, , *42
123519 Fix taken at 12:35:19 UTC
...
545.4,M Altitude, Metres, above mean sea level
46.9,M Height of geoid (mean sea level) above WGS84
ellipsoid

So, my question is this:
What other distance measurements can exist, aside from meters? I notice
that a few other measurements have "K" for Km/hr, etc. Does anyone have
a list of all the options?

-a

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] Antenna and range estimate

From: "Ling SM" <sm.ling@cmpmail.com>
Date: Mon, 6 Aug 2001 17:33:57 +0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-28286-2001.08.06-05.01.40--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi, Is there a rule-of-thumb way to calculate the range of transmission ?

I am thinking to do something with a 150Mhz transceiver module, but could
not afford to have a big antenna as the unit need to be portable so 1/4
wavelength is still too long.

This site http://www.eco-view.com/a.html has 2 short antenna, EW-ALO 145
Small Whip Antenna and EW-ACL 145 Cylinder Antenna, I am interested to know
what would be the impact on the range and how far could I reach with these
antennas. How could I calculate that ? web site or formula ?

Ling SM

----- Original Message -----
From: "Massimo Monti" <montimax@tin.it>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Friday, June 22, 2001 12:00 AM
Subject: [picsig] WM-918/WX-200 wx stations with Pic-E

> Hi, i am IK3SVW Max.
> I have just uploaded on TAPR PICSIG area my software for letting
> Oregon-Huger WM-918 and Radio Shack WX-200 weather devices to opeate as
> stand-alone APRS wx stations.

> The distribution file is wm918.zip, and is based on original u2k pakage by
> Byon N6BG and Steve K4HG.
>
> '73 and good APRS de Max IK3SVW - italian home page
> http://space.tin.it/io/lhmon
>
> ---
> You are currently subscribed to picsig as: sm.ling@cmpmail.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

6. [picsig] Re: Antenna and range estimate

From: "ScottM" <smorris@mindspring.com>
Date: Mon, 6 Aug 2001 06:26:24 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-28287-2001.08.06-05.48.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Check MFJ for a dualband 19" whip gain antenna. Cheap and short.

http://www.mfjenterprises.com/products.php?prodid=MFJ-1724B

Scott
----- Original Message -----
From: "Ling SM" <sm.ling@cmpmail.com>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Monday, August 06, 2001 5:33 AM
Subject: [picsig] Antenna and range estimate

> Hi, Is there a rule-of-thumb way to calculate the range of transmission ?
>
> I am thinking to do something with a 150Mhz transceiver module, but could
> not afford to have a big antenna as the unit need to be portable so 1/4
> wavelength is still too long.
>
> This site http://www.eco-view.com/a.html has 2 short antenna, EW-ALO 145
> Small Whip Antenna and EW-ACL 145 Cylinder Antenna, I am interested to
know
> what would be the impact on the range and how far could I reach with these
> antennas. How could I calculate that ? web site or formula ?
>
> Ling SM
>
>
>
>
>
>
>
>
> ----- Original Message -----
> From: "Massimo Monti" <montimax@tin.it>
> To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
> Sent: Friday, June 22, 2001 12:00 AM
> Subject: [picsig] WM-918/WX-200 wx stations with Pic-E
>
>
> > Hi, i am IK3SVW Max.
> > I have just uploaded on TAPR PICSIG area my software for letting
> > Oregon-Huger WM-918 and Radio Shack WX-200 weather devices to opeate as
> > stand-alone APRS wx stations.
> > The distribution file is wm918.zip, and is based on original u2k pakage
by
> > Byon N6BG and Steve K4HG.
> >
> > '73 and good APRS de Max IK3SVW - italian home page
> > http://space.tin.it/io/lhmon
> >
> > ---
> > You are currently subscribed to picsig as: sm.ling@cmpmail.com
> > To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>
> ---

> You are currently subscribed to picsig as: smorris@mindspring.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] Re: Antenna and range estimate

From: "Richard C. Bandla" <ve3cvg@rac.ca>
Date: Mon, 06 Aug 2001 08:05:25 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-28305-2001.08.06-07.26.14--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ling,
As you may know, assessment of antenna effectiveness is very complex and dependent on the sensitivity of the receiver, the power leaving the transmitting antenna, the antenna characteristics at each end (height, gain, and pattern), the receive feedline losses, the distance between the two antennas, the mode of communication, and the terrain and atmosphere in between. I don't think that there is a meaningful "rule of thumb" or easy answer. In other words you will have to find a mathematical model and plug in all the various factors.

There are some interesting comparisons for power level vs S meter reading at receiver (which could be equated to antennas, of course) in this months copy of CQ magazine. A chart in the magazine shows that if you are receiveing a signal at S9 at the receiver with a given power at the transmitter, what you can reduce the power to/by and still have a useful signal.

The other thing that is very useful are the charts showing azimuthal and elevation patterns for the antenna. If the manufacturer does not provide the info on the web site, ask for the charts. If you do not get the charts, do not buy the antenna.

I will have a look for a mathematical model. Perhaps someone else on the sig can offer one.

Regards.
Rick (VE3CVG)

At 17:33 2001-08-06 +0800, you wrote:
>Hi, Is there a rule-of-thumb way to calculate the range of transmission ?
>

1355 Minogue Cres., Cumberland, ON, Canada K4C1B4
phone 613 833-2787 (home)   fax 613 833 3032
phone 613 833-1950 (work)

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

8. [picsig] NMEA?

From: Adam Berson <berson@cmu.edu>
Date: Mon, 06 Aug 2001 10:30:15 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-28332-2001.08.06-09.52.40--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

hello all
I am writing a utility for PalmOS to read GPS data from my
Tripmate (with NMEA hack adapter), to use for GeoCaching(.com).

I was looking over the NMEA FAQ at http://www.deinfo.es/cnv/nmea.htm -
this is a VERY valuable thing to come across. I would like to thank the
contributors. Does anyone have any other links of a similar nature?

In the GPGGA sentence, the FAQ has the following:

GGA - Global Positioning System Fix Data
GGA,123519,4807.038,N,01131.324,E,1,08,0.9,545.4,M,46.9,M, , *42
123519 Fix taken at 12:35:19 UTC

```
...
545.4,M Altitude, Metres, above mean sea level
46.9,M Height of geoid (mean sea level) above WGS84
ellipsoid
--------------------


So, my question is this:
What other distance measurements can exist, aside from meters?  I notice
that a few other measurements have "K" for Km/hr, etc.  Does anyone have
a list of all the options?

-a

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

9. [picsig] Re: NMEA?

```
From: James Jefferson <jjeffers@deskmedia.com>
Date: Mon, 06 Aug 2001 09:36:07 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-28334-2001.08.06-09.57.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
>So, my question is this:
>What other distance measurements can exist, aside from meters?  I notice
>that a few other measurements have "K" for Km/hr, etc.  Does anyone have
>a list of all the options?

You probably won't see anything besides meters coming out of a GPS. :-)

-Jim

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

10. [picsig] Re: NMEA?

```
From: Jeff King <jeff@aerodata.net>
Date: Mon, 06 Aug 2001 12:34:36 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-28358-2001.08.06-11.54.59--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
Adam Berson wrote:
>
> hello all
> I am writing a utility for PalmOS to read GPS data from my
> Tripmate (with NMEA hack adapter), to use for GeoCaching(.com).

Not answering your question, but thought this might be of interest
to you:

http://sourceforge.net/projects/smartpalm/

BTW, my 8 year old and 6 year old girls have three caches found so far.
They want to do there own soon. It is a great hobby.

73

Jeff

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

11. [picsig] Re: NMEA?

```
From: "Curt Mills, WE7U" <hacker@tc.fluke.com>
Date: Mon, 6 Aug 2001 10:52:07 -0700 (PDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-28492-2001.08.06-20.23.35--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
On Mon, 6 Aug 2001, Adam Berson wrote:

> I was looking over the NMEA FAQ at http://www.deinfo.es/cnv/nmea.htm -
> this is a VERY valuable thing to come across.  I would like to thank the
```

> contributors. Does anyone have any other links of a similar nature?

Another source is the gps.pl program that Lane Holdcroft and I wrote
in Perl. http://www.eskimo.com/~archer will get you to my main page,
then go to the FTP site link on the left and you should find it.

Many of the NMEA sentences are documented quite nicely in the Perl
code. Very readable comments, at least for that section.

Program runs on DOS (with FOSSIL drivers) and on Linux, if you care
to try to run it.

Curt Mills, WE7U   hacker.NO_*SPAM@tc.fluke.com
Senior Methods Engineer/SysAdmin
"Lotto: A tax on people who are bad at math." -- unknown
"Windows: Microsoft's tax on computer illiterates." -- WE7U

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

12. [picsig] Re: Antenna and range estimate

From: "Ling SM" <sm.ling@cmpmail.com>
Date: Thu, 9 Aug 2001 01:13:57 +0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-28887-2001.08.08-12.41.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks Richard,

I found this site that has some useful on small power antenna
http://www.rfm.com/corp/appdata/antenna.pdf

There is a model to estimate the transmission range with the virtual wire
software
http://www.rfm.com/products/vwosoftware.htm
but because it is 4.68M, I have not evaluated it yet.

Regards, Ling SM

> As you may know, assessment of antenna effectiveness is very complex and
> dependent on the sensitivity of the receiver, the power leaving the
> transmitting antenna, the antenna characteristics at each end (height,
> gain, and pattern), the receive feedline losses, the distance between the
> two antennas, the mode of communication, and the terrain and atmosphere in
> between. I don't think that there is a meaningful "rule of thumb" or easy
> answer. In other words you will have to find a mathematical model and plug
> in all the various factors.
>
> There are some interesting comparisons for power level vs S meter reading
> at receiver (which could be equated to antennas, of course) in this months
> copy of CQ magazine. A chart in the magazine shows that if you are
> receiveing a signal at S9 at the receiver with a given power at the
> transmitter, what you can reduce the power to/by and still have a useful
> signal.
>
> The other thing that is very useful are the charts showing azimuthal and
> elevation patterns for the antenna. If the manufacturer does not provide
> the info on the web site, ask for the charts. If you do not get the
charts,
> do not buy the antenna.
>
> I will have a look for a mathematical model. Perhaps someone else on the
> sig can offer one.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

13. [picsig] PIC16F84-10 & Ceramic Resonator ZT1 10.0 MT

From: <runtime@intelnet.net.gt>
Date: Thu, 9 Aug 2001 18:39:14 GMT-6
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-29146-2001.08.09-20.00.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello all,

We made a simple program like this:

```
'Filename: Blink.bas

Define OSC 10

                Pause 2000
loop:         High PORTB.7
                Pause 5000
                Low PORTB.7
                Pause 5000
                Goto loop
                End
```

We are using only a PIC16F84-10 and a ceramic resonator, we think we don□t need
a capitor to make the ceramic resonator to oscillate.
The programmer say everything is ok, but when we put the pic on a board with
the resonator an apply 5v to the pic, it looks dead.
The pic is not blinking the portb.7, any ideas? Thank you in advance

Peter Bennett

_____
Mensaje enviado por medio de Webmail IntelNet
http://www.intelnet.net.gt

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

14. [picsig] Re: PIC16F84-10 & Ceramic Resonator ZT1 10.0 MT

From: John Hansen <hansen@fredonia.edu>
Date: Thu, 09 Aug 2001 21:36:06 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-29153-2001.08.09-21.07.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You do not need capacitors if you use a resonator. I've never used PIC
Basic, but here are a couple of things to check:

1. Have you set the fuse correctly for HS mode. The default is RC, so if
you don't explicitly set it, it will not run (I've done this a couple of
times!).

2. Have you set pin 7 to output? I don't see that in the code below, but
perhaps you've done that somewhere else.

John W2FS

At 06:39 PM 8/9/01 +0000, you wrote:

```
>Hello all,
>
>We made a simple program like this:
>
>'Filename: Blink.bas
>
>Define OSC 10
>
>                Pause 2000
>loop:         High PORTB.7
>                Pause 5000
>                Low PORTB.7
>                Pause 5000
>                Goto loop
>                End
>
```

>We are using only a PIC16F84-10 and a ceramic resonator, we think we don´t
>need
>a capitor to make the ceramic resonator to oscillate.
>The programmer say everything is ok, but when we put the pic on a board with
>the resonator an apply 5v to the pic, it looks dead.
>The pic is not blinking the portb.7, any ideas? Thank you in advance

>
>Peter Bennett
>
>
>
>
>_____
>   Mensaje enviado por medio de Webmail IntelNet
>http://www.intelnet.net.gt
>
>
>---
>You are currently subscribed to picsig as: hansen@fredonia.edu
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

15. [picsig] Re: PIC16F84-10 & Ceramic Resonator ZT1 10.0 MT

From: "Steven Bible" <n7hpr@tapr.org>
Date: Sun, 12 Aug 2001 18:25:41 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-29603-2001.08.12-20.44.59--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> You do not need capacitors if you use a resonator.

Let's clarify this statement. Yes, you do need capacitors if you use a crystal or ceramic resonator. Some ceramic resonators come with the capacitors already built in. But beware that you can purchase ceramic resonators with and without capacitors. Either you provide the capacitors with a ceramic resonator without internal caps, or you use a ceramic resonator with built-in caps.

The reason you need the capactors is that the oscillator in the PICmicro is a Pierce Oscillator and the two capacitors provide 180 degrees phase shift, in addition to the 180 degrees phase shift provided by the internal inverter, for a total of 360 degrees phase shift that is required to sustain oscillation. The programmable fuse selection for the oscillator (RC, LP, XT, HS) are all gain settings for the oscillator. Crystals and ceramic resonators need high gain thus the selection of HS is required. It is desired that the lowest gain setting that will sustain oscillation over the temperature and voltage range be selected. Too high a gain will cause the crystal or ceramic resonator to fail due to cracking.

There is at least two application notes on the Microchip web site that explain crystal selection for PICmicros.

For information on crystal oscillators (Pierce, Colpitts, Clapp, Butler, etc.) do a search on the web using "crystal oscillator" or read up about them in the ARRL Handbook or any general electronics text.

> I've never used PIC Basic, but here are a couple of things to check:

I agree with John, check that you have made all the initialization routines required to set up the programming fuses in the PICmicro. I've never used PIC Basic, but I am sure if you read in the manual you should find a section describing this.

Good luck. Let us know what you find out.

- Steve, N7HPR
  (n7hpr@tapr.org)

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

16. [picsig] Re: PIC16F84-10 & Ceramic Resonator ZT1 10.0 MT

From: John Hansen <hansen@fredonia.edu>
Date: Sun, 12 Aug 2001 21:29:37 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-29605-2001.08.12-20.51.57--lyris.picsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

Steve's right about this, of course. Sorry for any confusion I may have
caused.... I've never bought the ones without caps.   But do be careful,
the without caps models are generally cheaper than the ones that contain
capacitors.

John

At 06:25 PM 8/12/01 -0700, you wrote:
>Let's clarify this statement. Yes, you do need capacitors if you use a
>crystal or ceramic resonator. Some ceramic resonators come with the
>capacitors already built in. But beware that you can purchase ceramic
>resonators with and without capacitors. Either you provide the capacitors
>with a ceramic resonator without internal caps, or you use a ceramic
>resonator with built-in caps.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

17. [picsig] Digital PLL ?

From: mark@catolico.com.br
Date: Thu, 23 Aug 2001 10:41:14 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-31662-2001.08.23-09.21.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

I have made a PLL with a PIC6F84 for clock recovery from a synchronous
bit stream.

My approach was setting up the timer for overflow at each bit period
and input the bit stream to the INT pin.

At every high-to-low signal transition, the interrupt routine compares
the timer with a fixed value to knows if the timer have to be delayed
or advanced.

In both cases, the software changes the timer by a liltle amount, say
1/64 bit period.

In case the timer matches the fixed value (a small window, in fact),
it is not changed.

My questions are :

- Is there a better way for doing this ? I mean, lower jitter ?

- What will be the best timer correction amount ?

Thanks for any comments.

73, Marcelo - PY3SS
http://py3ss.cjb.net

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

18. [picsig] Re: Digital PLL ?

From: "Jeff King" <transit_man@hotmail.com>
Date: Thu, 23 Aug 2001 18:38:26 +0000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-31706-2001.08.23-14.02.13--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi:

James Jefferson did a PIC version of the TAPR statemachine DCD
device. This basically was a Digital PLL looking for a certain
bit occurance. Looking at the code might be helpful, although
I don't know if the techniques are any different then you

described.

http://www.deskmedia.com/~jjeffers/packet/pic/dcd-code.txt
http://www.deskmedia.com/~jjeffers/packet/pic/dcd-explanation.txt

Can't help you anymore then the above.

Good luck

-Jeff King wb8wka

>From: mark@catolico.com.br
>Reply-To: "TAPR PIC Development Special Interest Group"
><picsig@lists.tapr.org>
>To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
>Subject: [picsig] Digital PLL ?
>Date: Thu, 23 Aug 2001 10:41:14 -0300
>
>Hi,
>
>I have made a PLL with a PIC6F84 for clock recovery from a synchronous
>bit stream.
>
>My approach was setting up the timer for overflow at each bit period
>and input the bit stream to the INT pin.
>
>At every high-to-low signal transition, the interrupt routine compares
>the timer with a fixed value to knows if the timer have to be delayed
>or advanced.
>
>In both cases, the software changes the timer by a liltle amount, say
>1/64 bit period.
>
>In case the timer matches the fixed value (a small window, in fact),
>it is not changed.
>
>My questions are :
>
>- Is there a better way for doing this ? I mean, lower jitter ?
>
>- What will be the best timer correction amount ?
>
>Thanks for any comments.
>
>---
>73, Marcelo - PY3SS
>http://py3ss.cjb.net
>--------------------
>
>---
>You are currently subscribed to picsig as: jeff@aerodata.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

_____
Get your FREE download of MSN Explorer at http://explorer.msn.com/intl.asp

---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

19. [picsig] New "A" version PIC observation.

From: Ron Graham <rongraham@magnet.com.au>
Date: Sun, 26 Aug 2001 09:08:07 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: zlaprs@mail.nzart.org.nz
Message-ID: <LYR6890-32091-2001.08.25-18.14.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All,
          Spent some frustrating hours yesterday trying to programme the
newer version PIC16F84A-20P with the on board programmer of the PIC-E clone
.. (I call it APRS Interface). After looking for faults on the boards,
trying various boards and PIC's, I went back to an earlier unit I had
built/tested. Eventually, I noted the older 16F84-10P PIC's would programme
OK in the newer boards.
Verified this a number of times and have come to the conclusion that the

newer PIC's maybe draw more current while programming and the rather
limited on board programmer isn't up to it.

          There are ways around this .. it has been noted before that some
computers are rather limited in their RS-232 com port voltages/drive an
trying another computer will often solve the problem. Also, the GPS-E-2g
program will write a hex file, which in turn can be used the programme the
PIC in a regular programmer. Must admit though, the on board programmer
with the older PIC's is certainly neat.

Ron, VK4BRG
http://users.mackay.net.au/~ron/

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20. [picsig] PRESCALER FOR USE WITH PIC FREQUENCY COUNTER

From: Neil Thomas <meltek_n@global.co.za>
Date: Sun, 26 Aug 2001 10:32:08 +0200
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-32176-2001.08.26-03.53.11--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As a programming project at the Port Elizabeth Amateur radio Society we
developed a PIC frequency counter using a PIC 16F84. Can anyone advise
us where we can obtain a prescaler that can operate from 30MHz to say
500MHz? I have found many prescalers operating from 100MHz up to
several GHz but nothing that are current and that can operate at the low
frequency. A low divide ratio will be preferable.

Drop me a line for a circuit and .ASM file.   The updated files will
also be posted on the pears.8m.com site.

Neil Thomas
ZR2NT

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

21. [picsig] Re: PRESCALER FOR USE WITH PIC FREQUENCY COUNTER

From: "Scott - KD5MHM" <kd5mhm@kd5mhm.org>
Date: Sun, 26 Aug 2001 14:54:03 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-32295-2001.08.26-15.21.02--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Neil,
I was about to toy with a PIC to do something similar (not exactly a freq
counter). I've always wanted a freq counter and (still!!!) don't have one.

I love kits and would be interested in making one of the freq counters up to
play with (sorry I can't help on the prescaler... yet).

Is there more info on the PEARS group?

Best wishes,
Scott
kd5mhm

----- Original Message -----
From: "Neil Thomas" <meltek_n@global.co.za>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Sunday, August 26, 2001 3:32 AM
Subject: [picsig] PRESCALER FOR USE WITH PIC FREQUENCY COUNTER

> As a programming project at the Port Elizabeth Amateur radio Society we
> developed a PIC frequency counter using a PIC 16F84. Can anyone advise
> us where we can obtain a prescaler that can operate from 30MHz to say
> 500MHz? I have found many prescalers operating from 100MHz up to
> several GHz but nothing that are current and that can operate at the low
> frequency. A low divide ratio will be preferable.
>
> Drop me a line for a circuit and .ASM file.   The updated files will

> also be posted on the pears.8m.com site.
>
> Neil Thomas
> ZR2NT
>
>
>
> ---
> You are currently subscribed to picsig as: kd5mhm@kd5mhm.org
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>
>

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22. [picsig] 2001 ARRL/TAPR DCC September 21-23, 2001

From: "Steven Bible" <n7hpr@tapr.org>
Date: Mon, 27 Aug 2001 23:01:48 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-32728-2001.08.28-01.21.38--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

2001 ARRL/TAPR Digital Communications Conference
Cincinnati, Ohio
September 21-23, 2001

- -
Hurry! Conference Room Rates end September 1st!
- -

DCC Schedule Highlights:

Friday
All Day APRS Seminar

Saturday
Technical Papers and Introductory Sessions
Banquet Speaker and Prize Drawing

Sunday - 5 Hour Seminar:
"Simulating Circuits and Systems with Serenade SV"
by Dave Newkirk, W9VES

- -

The 20th ARRL and TAPR Digital Communications Conference will be held
September 21-23 in Cincinnati, Ohio. The annual gathering provides an
international forum for radio amateurs involved in digital communication,
networking, and related technologies to meet, publish their work, and
present new ideas and techniques for discussion.

The DCC is for technically oriented amateurs of all experience levels to
exchange ideas and learn about recent hardware and software advances,
theories, experimental results, and practical applications.

Sessions at the beginner, intermediate, and advanced levels will be offered
in selected areas of digital communication. Topics include APRS, satellite
communication, TCP/IP, digital radio, spread spectrum and other introductory
topics. Two symposia/seminars will be held which allow those with additional
time and interest to make the most of the conference. For those who may have
interest in just one symposium or seminar, registration for the conference
is not required to attend these activities.

The DCC banquet is Saturday night. A guest speaker will speak after the
banquet and a prize drawing will top the evening. The Sunday morning seminar
topic has not yet been announced.

This year's fifth annual Automated Position Reporting System (APRS) National
Symposium will be an all-day Friday event moderated by Steve Dimse,
K4HG--the developer of javAPRS and www.findu.com. Possible attendees include
APRS software authors such as Bob Bruninga, WB4APR--the father of
APRS--Keith Sproul, WU2Z, and Mark Sproul, KB2ICI--the developers of MacAPRS
and WinAPRS--Brent Hildebrand, KH2Z--the developer of APRSPLUS, Mike Musick,
N0QBF--developer of PocketAPRS--and other nationally known APRS leaders.
This session will include in-depth discussions and presentations on the
status and future of APRS. It's a unique opportunity to gain insight into

this fast-paced aspect of digital operation that combines computers, packet
radio and GPS.

Local co-hosts for the 2001 ARRL and TAPR DCC are
Greater Cinti Amateur Radio Assn. http://w3.one.net/~rkuns/gcara.html
DIAL Radio Club http://www.qsl.net/w8blv/Miami
Valley FM Association http://www.mvfma.org/Southwest
Ohio Digital Symposium http://w3.one.net/~rkuns/swohdigi.html

Conference presentations, meetings, and seminars will be held at the Holiday
Inn Cincinnati--Airport and Conference Center
<http://www.basshotels.com/hotels/cvgap>; 859-371-2233. A special DCC room
rate of $89/single and $89/double per night has been blocked for 50 rooms
and is available until September 1. Once the 50 rooms have been reserved,
room rates will increase. The hotel provides transportation to and from the
Cincinnati/Northern Kentucky International Airport.

Full information, a registration form, and hotel information also may be
obtained by contacting Tucson Amateur Packet Radio, 972-671-TAPR (8277); fax
972-671-8716; e-mail: tapr@tapr.org.

Conference registration includes the conference Proceedings, sessions,
meetings, and lunch on Saturday. Registrations received before September 1
are $45. After September 1 or at the door, registration is $55. The banquet
is $30. The APRS National Symposium on Friday is $25. The Sunday seminar is
$20.

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23. [picsig] (Fwd) Re: PIC TNC on Balloons

From: VERHAP@OCC1.SD01.K12.ID.US
Date: Fri, 31 Aug 2001 14:56:36 -700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-33550-2001.08.31-16.24.35--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm designing a new balloon controller that is based on the MIM
Module. I have it working, but to stay within APRS standards, I can only
transmit NMEA sentences (the MIM prefixes data with a $).

I can't read the documentation on the TAPR site about the PIC E, I
just get a blank pdf document.

I'm interested in reading more about the PIC TNC, I'd like to use
one as a TNC in transparent mode. Is this possible? Can I get a copy of the documentation?

Paul

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24. [picsig] RE: (Fwd) Re: PIC TNC on Balloons

From: "Chris Hoffman" <ko6ga@earthlink.net>
Date: Sat, 1 Sep 2001 00:14:39 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-33604-2001.08.31-22.37.27--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Paul,

If needed, I could ZIP down what I have downloaded (.pdf, .txt), and
Email you the info...

here is the text that is in the intro of the document:

<PicE Text>
Introduction
The TAPR PIC-Encoder (PIC-E) is a general-purpose
packet radio encoder based on the Microchip, Inc.
PIC16F84 PIC microcontroller. The PIC-E was
designed to provide a generic interface between the
digital world (in the form of serial data streams) and
the amateur packet radio world (in the form of AX.25

packets) and is fully programmable by the user. For example, the user can program the PIC microcontroller to take serial data from a GPS receiver or weather station and transmit it as formatted packet frames. Virtually any data that can be provided to the device as a serial input stream can be reformatted and transmitted as 1200 bps packet radio.

The PIC-E is based on two chips: a Microchip, Inc. PIC16F84 microcontroller and a MX-COM, Inc. MX614 Bell 202 modem chip. The PIC16F84 is a general purpose "computer on a chip" that can be programmed and reprogrammed by the end user. The PIC-E has an on-board PIC programmer. It is only necessary to connect a short serial cable between the PIC-E and a PC serial port and run the appropriate programming software.
The PIC can be programmed to receive an incoming data stream and reformat it for transmission as AX.25 frames. The PIC sends the formatted data to the MX614 that generates tones necessary to transmit 1200 bps packet over the radio's audio channel. The MX614 contains an energy detect circuit. Receive audio can be routed to the MX614 and it can determine whether the channel is in use and send this information back to the microcontroller. As a result, no additional VOX or carrier detect circuitry is required to prevent the PIC-E from colliding with other users on the channel. The MX614 can detect both digital signals and voice, so it is suitable for applications where digital and audio signals are mixed on the same frequency.
The PIC-E is an open system and it is hoped that many hams will use it as a platform for developing new and innovative applications. Almost any application that involves point to point or point to multi-point transmission of low-density data is a candidate for PIC-E development. To write applications for the PIC-E you will need to learn how to develop PIC firmware. Don't worry, it is not all that difficult. Most of what you will need to get started is readily available at little or no cost. The software to get started in PIC development is available for free at http://www.microchip.com. A discussion of the basics of getting started in PIC programming can be found in an article by W2FS in the October 1998 issue of QST. The Proceedings of the 1998 TAPR/ARRL Digital Communications Conference contains information on how to implement AX.25 UI frames in PIC microcontroller. While the 16F84 contains only 1K of program space, it turns out that this provides enough room not only to decode incoming serial data and construct outgoing packets, but to do a significant amount of processing and reformatting of the data as well.
As PIC-E programs are developed they will be displayed or linked from the TAPR PIC-E web site located at http://www.tapr.org/taprf/html/Fpice.html. If you've created a project and would like to display or link to it, contact TAPR at tapr@tapr.org.
Updated documentation can be found at http://www.tapr.org/taprf/html/Fpice.html or ftp://ftp.tapr.org/picsig/docs/.
Contributed files can be found at ftp://ftp.tapr.org/picsig/software/. Files can be anonymously uploaded to ftp://ftp.tapr.org/picsig/upload/.
PIC-E is discussed on the PIC special interest group. You can join PIC SIG via the web at http://www.tapr.org/cgi-bin/lyris.pl?join=picsig.
</PicEText>

I have gone to the ftp sites mentioned above, and have found some nice recourses available on their server. Sill, the links shown on the pages are growing....

-Chris
KO3GA

-----Original Message-----

From: bounce-picsig-25621@lists.tapr.org
[mailto:bounce-picsig-25621@lists.tapr.org]On Behalf Of
VERHAP@OCC1.SD01.K12.ID.US
Sent: Friday, August 31, 2001 5:57 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] (Fwd) Re: PIC TNC on Balloons

I'm designing a new balloon controller that is based on the MIM
Module. I have it working, but to stay within APRS standards, I can only
transmit NMEA sentences (the MIM prefixes data with a $).

I can't read the documentation on the TAPR site about the PIC E, I
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I'm interested in reading more about the PIC TNC, I'd like to use
one as a TNC in transparent mode. Is this possible? Can I get a copy of
the documentation?

Paul

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September 2001

Original source file: picsig.0109
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0109

1. [picsig] CONDOLENCES FROM PORT ELIZABETH

From: Neil Thomas <meltek_n@global.co.za>
Date: Wed, 12 Sep 2001 07:12:51 +0200
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-35590-2001.09.12-00.31.22--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

My sincere condolences go to the American people for their losses
suffered during the horrific terrorist attacks. I make myself
available if there is anything I can do to assist.

God bless you all.

Neil Thomas
ZR2NT

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] Re: BOF sessions at DCC?

From: Jeff King <jeff@aerodata.net>
Date: Sun, 16 Sep 2001 18:23:02 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-36502-2001.09.16-17.49.05--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi:

Did anyone at TAPR consider my request/suggestion of 8/1/2001? Not hearing back
from any decision makers, I figured no interest, but in light of some of the cancellations,
you might reconsider it to fill some time. As I said, I'd be willing to help out. I know
a number of embedded folks will be at the DCC, so that might be the one to do.

These were the high points of DCC's/CNC's of past years, and I'd like to see them come
back.

73

Jeff

Jeff King wrote on August 1st, 2001 to TAPR-ORG:
>
> Are there any BOF (Bird's Of a Feather) sessions scheduled for the DCC this year?
> I'd be interested in ones for PIC/AVL as well as Spread Spectrum (part 15 or otherwise)
> and would be willing to help or moderate them (I moderated the SS one in 1997).

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] Re: BOF sessions at DCC?

From: James Jefferson <jjeffers@deskmedia.com>
Date: Sun, 16 Sep 2001 17:40:53 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-36508-2001.09.16-18.04.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

What's a BOF session?

-Jim

At 06:23 PM 9/16/2001 -0400, you wrote:
>Hi:
>
>Did anyone at TAPR consider my request/suggestion of 8/1/2001? Not hearing
>back
>from any decision makers, I figured no interest, but in light of some of
>the cancellations,
>you might reconsider it to fill some time. As I said, I'd be willing to
>help out. I know

>a number of embedded folks will be at the DCC, so that might be the one to do.
>
>These were the high points of DCC's/CNC's of past years, and I'd like to
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>back.
>
>73
>
>Jeff
>
>
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> >
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> > I'd be interested in ones for PIC/AVL as well as Spread Spectrum (part
> 15 or otherwise)
> > and would be willing to help or moderate them (I moderated the SS one
> in 1997).
>
>---
>You are currently subscribed to picsig as: jjeffers@deskmedia.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] Re: BOF sessions at DCC?

From: Jeff King <jeff@aerodata.net>
Date: Sun, 16 Sep 2001 19:25:00 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-36516-2001.09.16-18.50.44--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

James Jefferson wrote:

> What's a BOF session?

Sorry, Birds Of a Feather. It is like the informal hallway conversations about
things of interest, like PIC's, except there is a time announced and a room
where people can sit around. Not a formal presentation, but something interactive
where everyone can participate. Show and tell, in depth technical discussions,
time to ask the presentors more detailed questions, ect.

Reason I has asked back in August was so it could be put on the schedule. When we
did the one on spread spectrum in 1997 at Baltimore, it was spur of the moment and
didn't make it on the formal schedule. As such, not everyone heard about it.

I think it has been at least 5 years since any formal BOF sessions and was hoping TAPR
could make them a part of the DCC again. I remember the ones from the 1991, 1994 CNC/DCC
I went to, quite interesting. NetSig, NOS, BBS and I think the grapes 56kbaud groups
all had their own.

Drop a note to TAPR asking them to include them on the agenda or allow interested
folks to request they be added. It really is the highpoint.

73

Jeff

> At 06:23 PM 9/16/2001 -0400, you wrote:
> >Hi:
> >
> >Did anyone at TAPR consider my request/suggestion of 8/1/2001? Not hearing
> >back
> >from any decision makers, I figured no interest, but in light of some of
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> >73

> >Jeff
> >

> >Jeff King wrote on August 1st, 2001 to TAPR-ORG:
> > >
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> > > I'd be interested in ones for PIC/AVL as well as Spread Spectrum (part
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> > > and would be willing to help or moderate them (I moderated the SS one
> > in 1997).

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] Re: BOF sessions at DCC?

From: "James Jefferson" <jjeffers@deskmedia.com>
Date: Sun, 16 Sep 2001 18:59:11 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-36519-2001.09.16-19.23.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Now that I know what they are, I'm interested in having a BOF session
for PICs and one for what's happening with Unix / Linux and APRS. Anyone
else?

I haven't been spending much time with PIC's this year, but I could make
a couple of pretty decent presentations with the APRS stuff I've been
doing.

-Jim
>
>
> James Jefferson wrote:
>
> > What's a BOF session?
>
> Sorry, Birds Of a Feather. It is like the informal hallway
conversations about
> things of interest, like PIC's, except there is a time announced and a
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the moment and
> didn't make it on the formal schedule. As such, not everyone heard
about it.
>
> I think it has been at least 5 years since any formal BOF sessions and
was hoping TAPR
> could make them a part of the DCC again. I remember the ones from the
1991, 1994 CNC/DCC
> I went to, quite interesting. NetSig, NOS, BBS and I think the grapes
56kbaud groups
> all had their own.
>
> Drop a note to TAPR asking them to include them on the agenda or allow
interested
> folks to request they be added. It really is the highpoint.
>
> 73
>
> Jeff
>
>
>
> > At 06:23 PM 9/16/2001 -0400, you wrote:
> > >Hi:
> > >
> > >Did anyone at TAPR consider my request/suggestion of 8/1/2001? Not

hearing
> > >back
> > >from any decision makers, I figured no interest, but in light of
some of
> > >the cancellations,
> > >you might reconsider it to fill some time. As I said, I'd be
willing to
> > >help out. I know
> > >a number of embedded folks will be at the DCC, so that might be the
one to do.
>
> > >These were the high points of DCC's/CNC's of past years, and I'd
like to
> > >see them come
> > >back.
>
> > >73
>
> > >Jeff
> > >
>
> > >Jeff King wrote on August 1st, 2001 to TAPR-ORG:
> > > >
> > > > Are there any BOF (Bird's Of a Feather) sessions scheduled for
the DCC
> > > this year?
> > > > I'd be interested in ones for PIC/AVL as well as Spread Spectrum
(part
> > > 15 or otherwise)
> > > > and would be willing to help or moderate them (I moderated the
SS one
> > > in 1997).
>
> ---
> You are currently subscribed to picsig as: jjeffers@deskmedia.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

6. [picsig] Re: BOF sessions at DCC?

From: David VanHorn <dvanhorn@cedar.net>
Date: Sun, 16 Sep 2001 23:49:26 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-36557-2001.09.17-00.12.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 06:59 PM 9/16/01 -0500, James Jefferson wrote:
>Now that I know what they are, I'm interested in having a BOF session
>for PICs and one for what's happening with Unix / Linux and APRS. Anyone
>else?

AVR? :)

--
Dave's Engineering Page: http://www.dvanhorn.org

I would have a link to http://www.findu.com/cgi-bin/find.cgi?KC6ETE-9 here
in my signature line, but due to the inability of sysadmins at TELOCITY to
differentiate a signature line from the text of an email, I am forbidden to
have it.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] Serial Port Applications: Do I need a MAX232 Chip?

From: "Zachary Grant Michael, KB9UQQ" <kb9uqq_2000@yahoo.com>
Date: Thu, 20 Sep 2001 18:01:51 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Message-ID: <LYR6890-37411-2001.09.20-18.26.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All,
I am new to the group, so if this has been asked before, just let me know. I
am just getting into PIC stuff, so I don't know much about them. Just enough
to be dangerous. <G> Anyways, if I want to do stuff with a PIC that involves
Serial Port Communicating, do I have to have a MAX232 chip, or can I use a
PIC of some sorts? Also, does anybody know a good place for PIC beginners?
Preferably a website. Thanks!
73 de kb9uqq
Zachary Grant Michael, KB9UQQ
AHubIN APRS Internet Server - http://kb9uqq.d2g.com

8. [picsig] Re: Serial Port Applications: Do I need a MAX232 Chip?

From: Jeff King <jeff@aerodata.net>
Date: Thu, 20 Sep 2001 19:12:44 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-37418-2001.09.20-18.38.27--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If your doing a "software uart" you generally can invert the signal and *maybe*
get away with no level conversion chip. If you are using the built-in UART,
you'll need a level conversion device, but you generall can get away with just
using a cheap transistor. I'd not put something like that in a commercial design,
but if your just hacking around it might be OK.

National makes a clone of the MAX232 that can be had quite a bit cheaper. I think Digikey
has it.

73

Jeff

> "Zachary Grant Michael, KB9UQQ" wrote:
>
> Hi All,
> I am new to the group, so if this has been asked before, just let me know. I am just getting into PIC
stuff, so I
> don't know much about them. Just enough to be dangerous. <G> Anyways, if I want to do stuff with a PIC
 that involves
> Serial Port Communicating, do I have to have a MAX232 chip, or can I use a PIC of some sorts? Also,
does anybody know
> a good place for PIC beginners? Preferably a website. Thanks!
> 73 de kb9uqq
> Zachary Grant Michael, KB9UQQ
> AHubIN APRS Internet Server - http://kb9uqq.d2g.com

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

9. [picsig] Re: Serial Port Applications: Do I need a MAX232 Chip?

From: Jeff King <jeff@aerodata.net>
Date: Thu, 20 Sep 2001 19:16:52 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-37419-2001.09.20-18.42.35--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I should have added a inverter for the built-in uart

Jeff King wrote:
>
> If your doing a "software uart" you generally can invert the signal and *maybe*
> get away with no level conversion chip. If you are using the built-in UART,
> you'll need a level conversion device, but you generall can get away with just
> using a cheap transistor. I'd not put something like that in a commercial design,
> but if your just hacking around it might be OK.
>
> National makes a clone of the MAX232 that can be had quite a bit cheaper. I think Digikey
> has it.
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> 73
>
> Jeff
>
> > "Zachary Grant Michael, KB9UQQ" wrote:
> >
> > Hi All,

> > I am new to the group, so if this has been asked before, just let me know. I am just getting into PIC stuff, so I
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> > Serial Port Communicating, do I have to have a MAX232 chip, or can I use a PIC of some sorts? Also, does anybody know
> > a good place for PIC beginners? Preferably a website. Thanks!
> > 73 de kb9uqq
> > Zachary Grant Michael, KB9UQQ
> > AHubIN APRS Internet Server - http://kb9uqq.d2g.com
>
> ---
> You are currently subscribed to picsig as: jeff@aerodata.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

--
|--|
| Jeff King   248-471-1787 F 248-471-0279 e-mail: jeff@aerodata.net |
| |
| "They that give up essential liberty to obtain a little temporary safety|
deserve neither liberty nor safety." -- Benjamin Franklin, 1759

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

10. [picsig] Re: Serial Port Applications: Do I need a MAX232 Chip?

From: "Andy Meng" <n8mx@yahoo.com>
Date: Thu, 20 Sep 2001 19:19:51 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-37428-2001.09.20-18.45.50--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Try http://www.piclist.com
it has a lot of good info for beginners and more advanced porgrammers as well.
For RS232 comms (in fact, I was just working on an RS232 program before I switched windows to read my email!) the MAX232 is used as a level converter. The MAX232 takes the -10/+10V that is the RS232 standard, then inverts it and outputs it at 0V/5V. It does the opposite for transmit back to the PC (or RS232-level device). Some PICs have built-in USARTs (Universal Synchronous / Asynchronous Receiver/Transmitter). It is possible to do serial comms without a USART, but then you have to use a bit-banged interface and that gets messy... The 16F627/628 and most of the 16F87x series have built-in USARTs. The USART handles all of the formatting issues and speed concerns. All you need to do is set it up (not too hard - tell it a number you calculate from baud rate and clock speed, and a few other things) and then read or write certain bytes to receive and transmit. So, a MAX232 is used to convert the levels to talk to an on-board USART on the PIC.

Hope this helps,
Andy N8MX
www.qsl.net/n8mx
  ----- Original Message -----
  From: Zachary Grant Michael, KB9UQQ
  To: TAPR PIC Development Special Interest Group
  Sent: Thursday, September 20, 2001 7:01 PM
  Subject: [picsig] Serial Port Applications: Do I need a MAX232 Chip?

  Hi All,
  I am new to the group, so if this has been asked before, just let me know. I am just getting into PIC stuff, so I don't know much about them. Just enough to be dangerous. <G> Anyways, if I want to do stuff with a PIC that involves Serial Port Communicating, do I have to have a MAX232 chip, or can I use a PIC of some sorts? Also, does anybody know a good place for PIC beginners? Preferably a website. Thanks!
  73 de kb9uqq
  Zachary Grant Michael, KB9UQQ
  AHubIN APRS Internet Server - http://kb9uqq.d2g.com

11. [picsig] Re: Serial Port Applications: Do I need a MAX232 Chip?

From: "Scott - KD5MHM" <kd5mhm@kd5mhm.org>
Date: Thu, 20 Sep 2001 19:36:02 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-37448-2001.09.20-20.02.14--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Andy's done a great job explaining here, but there a couple tidbits more:
Going from memory and I could be wrong:
RS232A spec required up to +/- 60vdc
RS232B was +/- 30vdc
RS232C was +/-15vdc

I think that +/- 1.5vdc is the minimum level to be considered a 1 or 0 and so that is why many devices that don't conform to RS232 specs (0 to 5vdc for example) don't work reliably in many situations. Zero volts falls into the 'noise margin level' and is not a valid signal voltage for 'true RS232' compatibility.

Additionally, the RS232C spec calls for a certain level of 'survivability'. The spec says that you must be able to short 4 outputs together without the any detriment to the hardware. That's why it is possible to screw up a cable badly and still have the hardware work. Note that while most of the 'cheap alternative' designs may do inversion and/or bi-polar voltages, almost all will self-destruct if you even threaten it with a shorted cable...

Also, this alternative is not as easy but in 'the old days' we used 1488 and 1489 chips (MC1488 and MC1489 from Motorola for example) and these are dirt cheap (25 cents or less each). These are RS232 'driver' and 'receiver' chips made specifically for RS232 ports and connect directly to TTL USART ports on uP chips and PIC chips. The drawback to these was that you had to provide both positive and negative voltages. However, for experimenting, a pair of 9v batteries lasted me about a year just running the serial port every day (not the board under test, the bench supply ran it)....

The Max232 family of chips were created because everyone was tired of using 7812/7912 pos/neg regulator pairs, caps, etc. The MAX232 family single-power-input parts really made life easier. However, if one owns a bench supply with pos/neg voltages, the 1488/1489 pair work great for experimenting.

I've also been able to blow up MAX232 chips fairly easily while the 1488/1489 pair are almost indestructible. I've blown up other parts that were incorrectly connected to the 1488's outputs because they were 'stronger' than the other part and something had to 'give'.

Finally, I couldn't get to the piclist site Andy mentions. I suspect that the new Nimda worm is busy causing denial-of-service outages around the web as I've had trouble getting email and web pages all day...

Best wishes,
Scott

(messages below shortened...)
From: Andy Meng
For RS232 comms the MAX232 is used as a level converter. The MAX232 takes the -10/+10V that is the RS232 standard, then inverts it and outputs it at 0V/5V. It does the opposite for transmit back to the PC (or RS232-level device). Some PICs have built-in USARTs (Universal Synchronous / Asynchronous Receiver/Transmitter). It is possible to do serial comms without a USART, but then you have to use a bit-banged interface and that gets messy... <snip> a MAX232 is used to convert the levels to talk to an on-board USART on the PIC.

Hope this helps,
Andy N8MX
----- Original Message -----
From: Zachary Grant Michael, KB9UQQ

do I have to have a MAX232 chip, or can I use a PIC of some sorts? Also, does anybody know a good place for PIC beginners?

Zachary Grant Michael, KB9UQQ

October 2001

Original source file: picsig.0110
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0110

1. [picsig] MicroChip Programming Resource

From: "Zachary Grant Michael, KB9UQQ" <kb9uqq_2000@yahoo.com>
Date: Fri, 5 Oct 2001 13:00:53 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-40434-2001.10.05-13.28.35--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All,
Does anybody know where a beginner can find a good resource to teach me how to program in the MicroChip language? I would appreciate it.
73 de kb9uqq
Zachary Grant Michael, KB9UQQ
http://kb9uqq.d2g.com/

2. [picsig] Re: MicroChip Programming Resource

From: David VanHorn <dvanhorn@cedar.net>
Date: Fri, 05 Oct 2001 13:24:18 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-40441-2001.10.05-13.47.54--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 01:00 PM 10/5/01 -0500, Zachary Grant Michael, KB9UQQ wrote:
>Hi All,
>Does anybody know where a beginner can find a good resource to teach me
>how to program in the MicroChip language? I would appreciate it.
>73 de kb9uqq
>Zachary Grant Michael, KB9UQQ
><http://kb9uqq.d2g.com/>http://kb9uqq.d2g.com/

MP-Lab does pretty much everything, but can I interest you in an AVR
starter kit, so you don't have to work in the stone age? :)
--
Dave's Engineering Page: http://www.dvanhorn.org

Got a need to read Bar codes? http://www.barcodechip.com
Bi-directional read of UPC-A, UPC-E, EAN-8, EAN-13, JAN, and Bookland, with
two or five digit supplemental codes, in an 8 pin chip, with NO external parts.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] Re: MicroChip Programming Resource

From: "Jay Sissom" <ka9okt@home.com>
Date: Sun, 7 Oct 2001 17:04:21 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-40753-2001.10.07-17.34.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here are some books that I own that talk about PIC's:

Programming and Customizing PICmicro Microcontrollers - Myke Predko 2nd Edition ISBN: 0-07-136172-3
PICMicro Microcontroller Pocket Reference - Myke Predko ISBN: 0-07-136175-8
Microcontroller Cookbook PIC/8051 - M. R. James ISBN: 0-2405-1448-3
Design with PIC Microcontrollers - John B. Peatman ISBN: 0-13-759259-0

and if you are interested in the AVR series of chips, here is a book that I have about them:

AVR RISC Microcontroller Handbook - Calus Kuhnel ISBN: 0-7506-9963-9

The Design with PIC Microcontrollers book is a textbook for a class about the PIC processor. Both that book and the Programming.. book would be good ones to start with. The Programming.. book has a circuit board for a PIC programmer. All you do is buy the parts and solder them in.

AVR chips seem to be more powerful than the PIC chips, but PIC chips are extremely popular so there are more resources for them. My local Microchip technical representative is a very nice guy and he said that if I (or anyone in his region) bought MicroChip development tools and they quit working for any reason (even if I hooked them up backwards or something else that was MY fault) he would replace them. He figured that if people have the development tools, they are going to use them. If they're broken they won't be used so he won't be able to sell chips to that person. Microchip had an even trade program where you can bring a competetor's chip programmer or development kit in and they would swap

evenly for a Microchip tool. I decided to start working with Microchip products then.

Jay
KA9OKT

  ----- Original Message -----
  From: Zachary Grant Michael, KB9UQQ
  To: TAPR PIC Development Special Interest Group
  Sent: Friday, October 05, 2001 1:00 PM
  Subject: [picsig] MicroChip Programming Resource

  Hi All,
  Does anybody know where a beginner can find a good resource to teach me how to program in the MicroChip language? I would appreciate it.
  73 de kb9uqq
  Zachary Grant Michael, KB9UQQ
  http://kb9uqq.d2g.com/

4. [picsig] PIC16F628 & FRAM (FM25640-P)

From: <runtime@intelnet.net.gt>
Date: Mon, 22 Oct 2001 12:38:00 GMT-6
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-42906-2001.10.22-14.03.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello all,

I have a PIC 16F628 attached to a GPS to receive NMEA ($GPRMC) sentences, I
want to store the GPS readings to a FRAM (FM25640-P). The FM25640-P is a 64Kb
serial memory that supports SPI and as I understant the PIC16F628 also supports
SPI.

I'm new to PIC's & FRAM's and would like to know if someone has a layout or
instructions on how to interface (wire) the PIC to the FRAM to write/read bytes.

My project so far has only the GPS engine, the PIC16F628 and a MAX233 to
convert the GPS from TTL to RS232, now I would like to add the FRAM to store
the readings...

Thank you in advance
Peter Bennett

_____
       Mensaje enviado por medio de Webmail IntelNet
http://www.intelnet.net.gt

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

November 2001

Original source file: picsig.0111
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0111

1. [picsig] APRS and digital mobile phones.

From: "Francesco Marradi" <fmarradi@inwind.it>
Date: Thu, 1 Nov 2001 18:15:39 +0100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-44666-2001.11.01-11.40.45--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi!

I'm experimenting PIC-E on different radio systems. With analog radios it works very fine as usual but when I try to connect two GSM mobile phones plugging PIC-E to their audio in/out, it don't work. If I replace one of the mobiles with a standard analog radio-telephone, it works rather well instead. Could the trouble due by the A/D-D/A conversion used by the two GSM mobiles?

Thank you.
Bye

Francesco

---

2. [picsig] RE: APRS and digital mobile phones.

From: "jsansone" <jsansone@ix.netcom.com>
Date: Thu, 1 Nov 2001 11:29:32 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-44668-2001.11.01-11.55.30--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The problem may be in the sampling rate for the A/D. I'm not sure what GSM
samples at but if it is a harmonic you may have an aliasing problem.

Regards
John Sansone
WB9JTS

-----Original Message-----
From: bounce-picsig-24653@lists.tapr.org
[mailto:bounce-picsig-24653@lists.tapr.org]On Behalf Of Francesco Marradi
Sent: Thursday, November 01, 2001 11:16 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] APRS and digital mobile phones.

Hi!

I'm experimenting PIC-E on different radio systems. With analog radios it
works very fine as usual but when I try to connect two GSM mobile phones
plugging PIC-E to their audio in/out, it don't work. If I replace one of the
mobiles with a standard analog radio-telephone, it works rather well
instead. Could the trouble due by the A/D-D/A conversion used by the two GSM
mobiles?

Thank you.
Bye

Francesco

---

3. [picsig] RE: APRS and digital mobile phones.

From: "HSHK" <hshk@ix.netcom.com>
Date: Thu, 01 Nov 2001 12:45:05 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-44673-2001.11.01-12.13.20--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Doesn't GSM use codecs and not "real" audio?

de KA8VIT

********** REPLY SEPARATOR **********

On 11/1/2001 at 11:29 AM jsansone wrote:
The problem may be in the sampling rate for the A/D. I'm not sure what GSM
samples at but if it is a harmonic you may have an aliasing problem.

Regards
John Sansone

WB9JTS

-----Original Message-----
From: bounce-picsig-24653@lists.tapr.org
[mailto:bounce-picsig-24653@lists.tapr.org]On Behalf Of Francesco Marradi
Sent: Thursday, November 01, 2001 11:16 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] APRS and digital mobile phones.

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the mobiles with a standard analog radio-telephone, it works rather well
instead. Could the trouble due by the A/D-D/A conversion used by the two
GSM mobiles?

Thank you.
Bye

Francesco

4. [picsig] RE: APRS and digital mobile phones.

From: "Robert Donnell" <bobdonnell@arkalmus.com>
Date: Thu, 1 Nov 2001 13:42:38 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-44698-2001.11.01-16.09.09--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

GSM and CDMA (and probably AT&T TDMA) do not use analog paths for their
voice transfer. They tend to use codecs that are designed to transmit
voices as generated by human vocal cords and passages. These are optimized
this way to reduce the data bit rate required to be sent over the air. I
got a clue here the other day when I showed one of my co-workers what a CDMA
cell phone signal looks like on a spectrum analyzer. The vocoder codec
system is designed to the point that when I stopped talking on the phone,
the percentage of time the transmitter was on-air dropped to nearly zero - I
had to keep talking (to my answering machine!) to keep my phone talking.
And no matter how you might try, 1200 bps packet data doesn't sound like
human voice, and the vocoder won't reproduce it well.

73, Bob, KD7NM
  -----Original Message-----
  From: bounce-picsig-17770@lists.tapr.org
[mailto:bounce-picsig-17770@lists.tapr.org]On Behalf Of HSHK
  Sent: Thursday, November 01, 2001 9:45 AM
  To: TAPR PIC Development Special Interest Group
  Subject: [picsig] RE: APRS and digital mobile phones.

  Doesn't GSM use codecs and not "real" audio?

  de KA8VIT

  ********** REPLY SEPARATOR **********

  On 11/1/2001 at 11:29 AM jsansone wrote:
    The problem may be in the sampling rate for the A/D. I'm not sure what
GSM samples at but if it is a harmonic you may have an aliasing problem.

    Regards

    John Sansone

    WB9JTS

    -----Original Message-----
    From: bounce-picsig-24653@lists.tapr.org
[mailto:bounce-picsig-24653@lists.tapr.org]On Behalf Of Francesco Marradi
    Sent: Thursday, November 01, 2001 11:16 AM
    To: TAPR PIC Development Special Interest Group
    Subject: [picsig] APRS and digital mobile phones.

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instead. Could the trouble due by the A/D-D/A conversion used by the two GSM
mobiles?

Thank you.

Bye

Francesco

5. [picsig] RE: APRS and digital mobile phones.

From: Ray Vaughan <ray@rayvaughan.com>
Date: Thu, 01 Nov 2001 16:53:16 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-44701-2001.11.01-16.20.19--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm experimenting PIC-E on different radio systems. With analog radios
it works very fine as usual but when I try to connect two GSM mobile
phones plugging PIC-E to their audio in/out, it don't work. If I replace
one of the mobiles with a standard analog radio-telephone, it works
rather well instead. Could the trouble due by the A/D-D/A conversion
used by the two GSM mobiles?

Don't forget that the A to D and D to A conversions, which there may be
a few of, take time. Could something in your protocol time out before
it gets to the destination?

Ray J. Vaughan, MS, CBTE, CERT
KD4BBM PG-7-15266
ray@rayvaughan.com
http://www.rayvaughan.com/ <http://www.rayvaughan.com/>
§97.1(c)-(d)

6. [picsig] RE: APRS and digital mobile phones.

From: David VanHorn <dvanhorn@cedar.net>
Date: Wed, 31 Oct 2001 16:55:49 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-44702-2001.11.01-16.21.37--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 11:29 AM 11/1/01 -0600, you wrote:

>The problem may be in the sampling rate for the A/D.

That, plus dropouts are allowed. The ear dosen't hear them well, but the
modem sure does.

Basically, you're hosed.

--
Dave's Engineering Page: http://www.dvanhorn.org

Got a need to read Bar codes? http://www.barcodechip.com
Bi-directional read of UPC-A, UPC-E, EAN-8, EAN-13, JAN, and Bookland, with
two or five digit supplemental codes, in an 8 pin chip, with NO external parts.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] Re: APRS and digital mobile phones.

From: "Tony Arnerich" <arnerich@fiberpipe.net>
Date: Sat, 3 Nov 2001 14:53:57 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-45059-2001.11.03-16.20.02--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

"Francesco Marradi" <fmarradi@inwind.it>

>I'm experimenting PIC-E on different radio systems. With analog radios =
>it works very fine as usual but when I try to connect two GSM mobile =
>phones plugging PIC-E to their audio in/out, it don't work.

Go here:

http://www.airfinity.com/default.asp?Style=Styles%2FAirfinity%2Ecss&SiteNam
e=AIRFINITY

and click on the "store" link for the wireless data modules. They do what
you want but with an RS232 interface not audio. Other manufacturers with
nice products are Ericsson and Siemens.

The prices on GSM data modules are low and still dropping. This is due,
among other things, to the ubiquity of vending machines. "Hey, I'm running
low on root beer!"

73,
Tony KD7TA

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8. [picsig] Sv: APRS and digital mobile phones.

From: "KPo_LH Mobilradio A/S" <kpo@lhmobil.dk>
Date: Sun, 4 Nov 2001 01:12:22 +0100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-45093-2001.11.03-18.31.14--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Dear OM

You got already some answers to Your Questions, and one of the comes pretty close to the truth, but here
 is my contribution.

GSM is using a codec and it is impossible to transmit FFSK data via the audio path like the ones from
PIC-E.
That covers also DTMF tones and the like. Although some would argue this statement is wrong (about DTMF)
 as pressing the buttons during speech generates DTMF tones in the other end, is is done as digital data
 in the air interface and DTMF tones encodes in the GSM infrastructure "on it way to the PSTN.
If You e.g. try to send a clean tone from a tonegenerator into the audio path of a GSM cellular/encoder
nothing is reproduced in the receiving end, but adding some slight noise, a wobling toen is reproduced.
A whistly is "dirty enought" to be reproduced.

Some many Years ago my compagny sold quit a number of systems actually transmitting 2400bps data via the
 GSM audio path, prior to true GSM Data was introduced, but that required a special modulation
technique, sounding like an angry duck or goos.

Many GSM cellular to day has as standard the ability to transmit data in any emaginable speed up to 9600
 bps using one timeslot, and up to roughly 57Kbs using the mode called higspeed data (in the downlink
only uplink limited to 9600) same type of speed also introduced by the mode GPRS which is just like
having a ASDL line.
GSM data and High speed data is circuit switched which means Yuo make a call and You have a permanent
connection until You terminate the call, and the money is pooring out of You pocket as You are charged
for the time connected, and as long as You are connected You cannot make a speech call.
GPRS is a packet circuit service where You are charged for the bytes transmitted and You are basicly
online all the time. As far as I know this service is working also during speech, but done trust this
info 100%.

A service working nicely during a speech conversation is SMS messages.

If You want to send the data prom PIC-E then You shall use the datastream to the modemchip, and have the
 data configured as normal serial data meaning a startbit 8 databit and a stopbit. If the data is 7bit
the there shall be a paritybit to ensure the bitstream is 10 bit in total per word/character.
Also when using GSM datacalls ensure to use the V110 protocol when possible (ISDN) as the connection is
setup in 10 sec compared to ordinary analog modem calls (GSM supports only V32 in the infrastructure)
which takes 30-40 sec until data is flowing.

The question about how to call to a modem with a PIC-E (it is not able to call ATDT +telephone number) there is in some GSM modem the possiblity to store a number in the cellular register (AT&Z0=<number> og ATZ1=<number>) and ussue anothe command which enables the cellular to make an call when the DTR line goes high and terminal the call when going law. The PTT line inverted culd perfom this funktion, but the NMEA data must not bee feed to the cellular before the carrier signal goes high.
The Siemens M20 datamodule is able to do this trick, but not softwarerevision after version 3.3 (I have this old software and the loader available 1 very valuable to my daily business !!

So the PIC-E needs only slightly twisting to be GSM compatible

That was all from me here in denmark one of the few countries where GSM is born

Kind regards

Kurt de OZ7OU

> ----- Oprindelig meddelelse -----
> Fra: Francesco Marradi
> Til: TAPR PIC Development Special Interest Group
> Sendt: torsdag, 1. november 2001 18:15
> Emne: [picsig] APRS and digital mobile phones.
>
> Hi!
>
> I'm experimenting PIC-E on different radio systems. With analog radios it works very fine as usual but when I try to connect two GSM mobile phones plugging PIC-E to their audio in/out, it don't work. If I replace one of the mobiles with a standard analog radio-telephone, it works rather well instead. Could the trouble due by the A/D-D/A conversion used by the two GSM mobiles?
>
> Thank you.
> Bye
>
> Francesco

9. [picsig] Sv: APRS and digital mobile phones.

From: "KPo_LH Mobilradio A/S" <kpo@lhmobil.dk>
Date: Sun, 4 Nov 2001 10:54:54 +0100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-45135-2001.11.04-04.14.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello again to all reading my precious message regarding GSM services

I apologize for the numerious spelling mistakes. The contribution was writen during the very dark hours !!

I would add the the dialing aspect that a greater number of GSM cellular phones has the ability to dial a number stored in the phonenumber storage either in the telephone SIM card or the telephone internal memory as well as in e.g. 5 fixed registers. The simple DTR dialing or "hardware dialing" as I already described is not so common any more.
This requires of course that PIC-E is modified so it issues one of several command (which could be set by dip switches or during compilation) dependant of the GSM brand. This command to be issued every time the PTT is enabled and could be e.g. ATDS2 if the number was stored in fixed register S2. The smartness to use the SIM card storage is that the number then is easily modified and need not be compiled into the modified PIC-E. The DTR line should still be wired to the PTT line with the right polarity and the GSM programmed with AT&D2 whish ensures hangup when PTT is disabled (DTR goes from high to low) . However some GSM units are so "stupid designed" that all these setting such as AT&D2 is not stored permanently even if the AT&W and AT&W0 is issued after programming the modem. Same applies for mode setting V110 and V32 (AT+CBST=71,0,1 and AT+CBST=7,0,1). Thus it is sensible to introduce these settings in the front of the dialing string so even if the phone has been switched off shortly it is still performing the right functions.
It is possible to find a universal setting scheme, which cover the lot of GSM cellulars, as most of these required command are covered by the ETSI GSM standard. So by studying the Nokia + Ericsson it would cover 95% here in Europe, and in the states Motorola might be needed as well, to hit said percentage.

By the way it is nice to see this forum its not totally dead/sleeping. Are there any forum/reflectors with simular activities more active than this?
Kind regards

Kurt de OZ7OU

> ----- Oprindelig meddelelse -----
> Fra: Francesco Marradi
> Til: TAPR PIC Development Special Interest Group
> Sendt: torsdag, 1. november 2001 18:15
> Emne: [picsig] APRS and digital mobile phones.

Hi!

I'm experimenting PIC-E on different radio systems. With analog radios it works very fine as usual but when I try to connect two GSM mobile phones plugging PIC-E to their audio in/out, it don't work. If I replace one of the mobiles with a standard analog radio-telephone, it works rather well instead. Could the trouble due by the A/D-D/A conversion used by the two GSM mobiles?

Thank you.
Bye

Francesco

10. [picsig] Sv: APRS and digital mobile phones.

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Mon, 5 Nov 2001 17:30:20 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-45287-2001.11.05-01.00.19--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

G'Day

I have had some experience with a MAXON GSM Phone/Modem... And I can tell you it was a pain... The 3rd SIM card worked, because although it was a modem, it used the data service, and the modem was actually at the mobile exchange, and prepaid cellular would not work with GSM data service. Then when we got a SIM that worked it would not work for normal dialup until we got out 3rd phone number, since although ISDN allows a service type, normal phones do not, so we got a voice number, then a fax number, and then a modem number...

I set this unit up to auto-answer, so that any RS-232 data would be sent through. This was sort of cool... Throughput was not bad, but there was a bit of a delay...

[The application BTW was to control a microwave dish 600 feet up a tower... We dialed into the GSM modem on the tower to control the channel for the receive, and the direction of the pan and tilt on the tower].

Darryl

Darryl Smith, VK2TDS POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au for domain names

---
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11. [picsig] Sv: Sv: APRS and digital mobile phones.

From: "KPo_LH Mobilradio A/S" <kpo@lhmobil.dk>
Date: Tue, 6 Nov 2001 05:15:21 +0100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-45462-2001.11.05-22.34.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Daryl

Long time since we last communicated.
Yes it can be a pain to be aquainted with the GSM traditions.
Prepaid GSM SIM card are usually only for speech.
A normal subscribtion allows both fax and data outgoing calls (mobile originated calls)
Incomming calls (mobile terminated calls) needs additional subscibtions and extra numbers for each required service so the GSM phone can find out what type of call it receives (just like in Your compagny where Your phone number are different from Your fax number).
You do not need to subscribe a faxnumber as well, the system operator cheats You if the did provide You with both numbers - you pay too much.
The number seen at the called party, if You make a mobile originated data call will be the same number as the speech number for a standard subscription, but if You have an additional data subscription the the number seen will be different for data and speech. GSM always transmit the number of the calling party unless You request it to be secret.
Bcause Yuo are calling the GSM You need the additional data subscription.
The delay You mentioned is the GSM processing which take time. For a connection between a GSM cellular

and a PSTN modem this propagation delay is 0,3 sec quite exactly (0,29sec) and is with a constant delay.
 Bewteen two GSM thus it is 0,6 sec.
This is important to realize for software sending small dataframes and expect an acknowledge from the other end before sending the next frame. Such software is going to be very slow. However by GSM, when requesting the nontransperant service, there is error correction in the air interface so robust (and normally the speed is not influenced because the data airspeed is about 15kbps allowing severe error correction) so the error rate is so extremely small that running error correction routine is "waste of software".
Any problem You are fighting just mail me don't waste time. I have many Years of experiance with GSM data.

Kind regards

Kurt de OZ7OU

----- Oprindelig meddelelse -----
Fra: "Darryl Smith" <Darryl@radio-active.net.au>
Til: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sendt: mandag, 5. november 2001 07:30
Emne: [picsig] Sv: APRS and digital mobile phones.

> G'Day
>
> I have had some experience with a MAXON GSM Phone/Modem... And I can
> tell you it was a pain... The 3rd SIM card worked, because although it
> was a modem, it used the data service, and the modem was actually at the
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> service type, normal phones do not, so we got a voice number, then a fax
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> tower... We dialed into the GSM modem on the tower to control the
> channel for the receive, and the direction of the pan and tilt on the
> tower].
>
>
> Darryl
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au for domain names
>
>
>
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12. [picsig] packet decoder ?

From: Ron Graham <rongraham@magnet.com.au>
Date: Thu, 22 Nov 2001 04:23:11 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-48041-2001.11.21-16.24.18--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Quite some time, I remember someone describing a packet decoder .. pic
device .. driving a 2 line X 16 character display. Can someone tell me:
a) if it decoded the compressed mic-e type APRS data.
b) where is the info on the device .. ? tapr site, ? file name.

Thanks, Ron, VK4BRG.

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13. [picsig] property for sale

From: Ron Graham <rongraham@magnet.com.au>
Date: Thu, 22 Nov 2001 04:34:04 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-48042-2001.11.21-16.24.34--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Pardon the bandwidth, but there is a vague connection to PIC's !!!.
Due to other interests, we wish to sell sell our 100 acre property, 4br
home, ham installation, small home based radio design/manufacturing
business near the coast in tropical Queensland, Australia.
Quite a nice life style .. semi retirement .. but still maintaining an
active involvement in things radio/
electronic. Price is very attractive in US dollars.
For more info, please see http://www.home.aone.net.au/yukan or e-mail me.

Regards, Ron, VK4BRG.

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14. [picsig] Re: packet decoder ?

From: "James Jefferson" <jjeffers@deskmedia.com>
Date: Wed, 21 Nov 2001 16:38:57 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-48044-2001.11.21-17.06.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You are probably thinking of Byon's PeekPack (www.byonics.com), but that only decodes packets, not parses them.

Otherwise you might be thinking of my SSMP (http://www.jarviscomputer.com/wx/ssmp/), which decodes weather packets (kinda) to a
2x40 display.

-Jim

> Quite some time, I remember someone describing a packet decoder .. pic
> device .. driving a 2 line X 16 character display. Can someone tell me:
> a) if it decoded the compressed mic-e type APRS data.
> b) where is the info on the device .. ? tapr site, ? file name.
>
> Thanks, Ron, VK4BRG.
>
>
> ---
> You are currently subscribed to picsig as: jjeffers@deskmedia.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

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15. [picsig] Re: packet decoder ?

From: "John P. Hart" <jphart@email.com>
Date: Wed, 21 Nov 2001 18:04:30 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-48045-2001.11.21-17.32.56--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Could you be referring to the HamHud family? See http://www.hamhud.net/

John

----- Original Message -----
From: James Jefferson <jjeffers@deskmedia.com>
To: TAPR PIC Development Special Interest Group <picsig@lists.tapr.org>
Sent: Wednesday, November 21, 2001 5:38 PM

Subject: [picsig] Re: packet decoder ?

> You are probably thinking of Byon's PeekPack (www.byonics.com), but that only decodes packets, not parses them.
>
> Otherwise you might be thinking of my SSMP (http://www.jarviscomputer.com/wx/ssmp/), which decodes weather packets (kinda) to a
> 2x40 display.
>
> -Jim
>
> > Quite some time, I remember someone describing a packet decoder .. pic
> > device .. driving a 2 line X 16 character display. Can someone tell me:
> > a) if it decoded the compressed mic-e type APRS data.
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> >
> > Thanks, Ron, VK4BRG.
> >
> >
> > ---
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> >
> >
>
>
>
> ---
> You are currently subscribed to picsig as: jphart@email.com
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December 2001

Original source file: picsig.0112
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0112

1. [picsig] Getting started in C

From: David Beach <dbeach@blvl.igs.net>
Date: Sun, 09 Dec 2001 11:53:05 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51088-2001.12.09-11.18.48--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Since this is a list for hams with an interest in PICs and I am one...

I have a bit of experience with PIC chips (programmed a few chips, modified a few programs, built a couple of projects - a keyer and the UniCounter by Ron Stone) but am far from being an expert in PIC assembly by any stretch. I would like to do more with PIC chips and would like to try programming in C, since that appears to be the most common 'higher-level' language in use. I would like to try building John Hansen's KISS-Mode TNC. Could I seek some advice from the group?

1) Any suggestions for a C compiler for general PIC use? (I don't want one limited to 'F84s or 256 bytes of code, etc.) The CCS compilers seem to be the most popular among hobbyists - certainly I cannot afford several hundred dollar plus ones like Hi-Tech.

How important is it to have the same compiler as everyone else? How portable is the C code between compilers?

(If anyone has the command-line CCS mid-range PIC C compiler and has moved to the CCS Windows version and wants to sell their old version, let me know. I might be interested!)

2) Suggestions for books on learning C on PICs? (I have programmed in higher level languages - 20+ years ago when I was studying EE at university. However, the Fortran, PL/C and Pascal I studied then look nothing like C!! And, of course, none were targeted at microcontrollers.)

CCS offers their command-line compiler with a book for $115 (the book, 'PIC C - An introduction to programming the Microchip PIC in C' by Nigel Gardner, by itself is $25, they say). Anyone used this book? Any comments on it? The on-line comments at Amazon are luke-warm.

3) Any suggestions for on-line resources for PIC C code snippets or other helpful resources? I have visited Peter Anderson's site (and bought some things from it) and he has quite a bit of C code both on-line and for sale. Other suggestions?

Finally, if anyone has other suggestions for me or URLs of other resourses, let me know. Should I even be considering using C until I am an 'expert' assembly programmer? Or, if this has been beaten to death before on the SIG, let me know where in the archives I can find it and I will look there!

Thanks for your help.

--
David Beach
VE3STI
Picton, Ontario

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] Re: Getting started in C

From: James Jefferson <jjeffers@deskmedia.com>
Date: Sun, 09 Dec 2001 12:08:26 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51101-2001.12.09-12.34.58--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Finally, if anyone has other suggestions for me or URLs of other resourses,
>let me know. Should I even be considering using C until I am an 'expert'
>assembly programmer? Or, if this has been beaten to death before on the SIG,
>let me know where in the archives I can find it and I will look there!

I don't know any Microchip Assembly ... and I do just fine with CCS's C.

Not knowing any C isn't a big deal either. With the embedded stuff you
break most of the traditional C paradigms anyhow.

If you do buy CCS's C compiler, which is the best bang for the buck, be
prepared to have to constantly upgrade. They like making lots of buggy
realeases.

-Jim Jefferson KB0THN

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3. [picsig] Re: Getting started in C

From: "Jason Rausch" <ke4nyv@msn.com>
Date: Sun, 09 Dec 2001 13:35:24 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51115-2001.12.09-13.05.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/html

In the past few months I have really started to get on the PIC bandwagon and I found that I like to use Hi-Tech better. I have no way of buying the full version, but the demo "student" version is great for playing around with 16F84's. Steve Bragg KA9MVA kinda talked me into the Hi-Tech compiler. I can see now why he likes it better. Plus, I'm not looking to spend that much on the CCS compiler.

Jason KE4NYV

My site: http://www.ke4nyv.com <http://www.ke4nyv.com>

>From: James Jefferson

>Reply-To: "TAPR PIC Development Special Interest Group"

>To: "TAPR PIC Development Special Interest Group"

>Subject: [picsig] Re: Getting started in C

>Date: Sun, 09 Dec 2001 12:08:26 -0600

>

>

>>Finally, if anyone has other suggestions for me or URLs of other

>>resourses,

>>let me know. Should I even be considering using C until I am an

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>>assembly programmer? Or, if this has been beaten to death before on

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>>let me know where in the archives I can find it and I will look

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>

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>be

>prepared to have to constantly upgrade. They like making lots of

>buggy

>realeases.

>

>-Jim Jefferson KB0THN

>

>---

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>

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4. [picsig] Re: Getting started in C

From: John Hansen <hansen@fredonia.edu>
Date: Sun, 09 Dec 2001 14:50:32 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51134-2001.12.09-14.19.03--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 11:53 AM 12/9/01 -0500, David Beach wrote:

>1) Any suggestions for a C compiler for general PIC use? (I don't want one
>limited to 'F84s or 256 bytes of code, etc.) The CCS compilers seem to be
>the most popular among hobbyists - certainly I cannot afford several hundred
>dollar plus ones like Hi-Tech.
>
>How important is it to have the same compiler as everyone else? How portable
>is the C code between compilers?

I've used the CCS product for several years now and been quite happy with
it. However, if one were going to invest in a professional tool, the
Hi-Tech compiler is probably the way to go. I do not think that I would
rely on the free demo version though, because the 16F84 has just about run
it's course. For new projects, I can't think of a reason to use this chip
rather than a 16F628.

One of the really nice things about CCS is the support libraries you get
with it for doing various forms of serial communication, implementing A/D
conversion, doing PWM, connecting to various things like LCD displays,
etc. This certainly simplifies things a lot.

Code is generally not portable between C compilers. In part this is
because some (like CCS) don't support the ANSI C standard while others
do. In part it is because compilers like CCS come with these libraries.

>CCS offers their command-line compiler with a book for $115 (the book, 'PIC
>C - An introduction to programming the Microchip PIC in C' by Nigel Gardner,
>by itself is $25, they say). Anyone used this book? Any comments on it? The
>on-line comments at Amazon are luke-warm.

It's an awful book. I'm using it this semester because I'm teaching a
course in PICs. It is bundled with a stripped down version of PCW (yes,
PCW, not PCM) that supports only the 16F877 chip in an educational package
for students for $50. I basically suggested that students throw away the
book. Ninety percent of the book is a C reference that has little or
nothing to do with CCS's compiler.   All of my students already are
competent C programmers so it won't help them much.

>3) Any suggestions for on-line resources for PIC C code snippets or other
>helpful resources? I have visited Peter Anderson's site (and bought some
>things from it) and he has quite a bit of C code both on-line and for sale.
>Other suggestions?

CCS's website (www.ccsinfo.com) has some samples that are available even if
you are not a registered user. It also has a user forum that is accessible
to everyone (including people who are not registered users).

>Finally, if anyone has other suggestions for me or URLs of other resourses,
>let me know. Should I even be considering using C until I am an 'expert'
>assembly programmer?

This is actually a pretty decent way to learn C. When I was learning C I
picked up a book called "C in Plain English" that I found to be very
clearly written and also a very good reference. I just checked amazon and
did not find it, but there was something called C++ in Plain English. I
don't know whether it was written by the same fellow or not.

The best way to proceed at this point is probably just to jump in and get
your feet wet.

John W2FS

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5. [picsig] Strange Doin's down on the CCS/Mchip Farm

From: John Hansen <hansen@fredonia.edu>
Date: Sun, 09 Dec 2001 22:10:37 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51204-2001.12.09-21.39.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've run into a rather strange problem in upgrading to new versions of the
CCS Compiler and MPLAB IDE. I thought the story might apply to more folks
than just me, and thus it might be worth posting here.

A couple of months ago I upgraded my CCS compiler, my chip programmer, and
my version of MPLAB all at the same time. Thus, without further research,
I'm not sure which to blame for the following difficulty. The problem
involves the programming of 16F877 chips (I've not experienced any problems
with the code for other chips). My old programming system involved:

1. A Microchip ICD with the original firmware. This was one of the very
earliest units they produced.
2. CCS's PCM compiler version 2.674 (a couple of years old).
3. MPLAB version 4.11

My new system involved:

1. A Microchip PicStart Plus.
2. CCS's PCW compiler (the latest version).
3. MPLAB ver 5.x (I think it was 5.4, but I'm not certain).

The first thing I noticed when I upgraded to a version 5 of MPLAB was that
my ICD no longer worked. I thought this might be because I wasn't using
the latest firmware, so I downloaded the latest firmware, burned it into an
appropriate chip, but found that it still didn't work.

The second thing was even stranger. I burned some chips for my PIC TNC
using the new development system and thought that they worked. I even sold
about a dozen of them (ouch!). In general, they did work just fine. The
terminal function worked great, the packet receive functions worked just
fine, etc. But when I tried to send packets, the PIC caused the MX614
chip to generate an odd tone (the pitch sounded somewhat lower in pitch
than real packet). Anyway, no TNC would decode the packets. I spent quite
a bit of time trying to find out what was wrong (at first I thought I had
made a mistake wiring the boards), but finally went back to the old
development system (with the ICD and version 4.11 of MPLAB) and all was
fine again. Now I'm in the process of "recalling" the TNC's that I sold
with the bad chips.

I mention this here for only one reason.... If you change your development

environment substantially, it may result in the need completely retest your products. I went through a fairly superficial testing procedure and when I found that the terminal functions of the chips worked, I assumed that they had burned properly (after all I hadn't changed a single line of the code). I don't think that the problem lies with the CCS compiler, because I also tried burning a chip with the old .hex file and had no luck with it either.   And before you ask, yes, I had turned off low voltage programming. The problem might be with the PicStart, or MPLAB, or it is possible that I don't have it configured properly (Doesn't explain why the ICD doesn't work under the new version though!).

A word to the wise.

John W2FS

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6. [picsig] Re: Strange Doin's down on the CCS/Mchip Farm

From: "Jeff King" <transit_man@hotmail.com>
Date: Mon, 10 Dec 2001 05:23:16 +0000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51217-2001.12.09-23.51.30--lyris.picsig#tapr.org@lists.tapr.org>
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John:

First of all, sorry for not getting back to your earlier private e-mail. Been away from the PIC's and busy out of town, but now doing a PIC project so can pay attention. Let me know if that problem still exists and I can mull it over. Anyways....

John Hansen <hansen@fredonia.edu> wrote:

>My new system involved:
>
>1. A Microchip PicStart Plus.

I've never had a problem with this unit, unlike my earlier one from Parralax. Also have a WARP3 which seems fairly good.

>2. CCS's PCW compiler (the latest version).

The 3.x series? I just upgraded to that today (3.061) but had held off for some time due to reports on the CCS forums that it was not ready for prime time. Some folks are still using the last release of 2.xxx.

IMPORTANT NOTE. I have noticed different versions of PCM generate different object code for the same source files. I had one production version of some code that would barely fit in a 16C621... going to a newer compilier made it about 8 bytes long and I had to shim it back into the 16c621. Typically the larger code size means he found a bug or some oversight in setting up the conditions on the chip. But be warned.

>3. MPLAB ver 5.x (I think it was 5.4, but I'm not certain).

Not been here yet...

>
>The first thing I noticed when I upgraded to a version 5 of MPLAB was that
>my ICD no longer worked. I thought this might be because I wasn't using
>the latest firmware, so I downloaded the latest firmware, burned it into an
>appropriate chip, but found that it still didn't work.

If you have a early ICD, some hardware mods need to be made. It should be on the web site but I don't know if that will fix your problem.

>But when I tried to send packets, the PIC caused the MX614
>chip to generate an odd tone (the pitch sounded somewhat lower in pitch
>than real packet).

Doesn't the MX614 have some back channel tones? Maybe somehow these were

being selected. With the same pick, but different dies (like going for a
16c621 to a 16c621a) I have noticed the DC characteristics change between
them.

>I mention this here for only one reason.... If you change your development
>environment substantially, it may result in the need completely retest your
>products.

Yeap.... good testing is a artform into itself.

Regards,

Jeff wb8wka

_____
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---
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7. [picsig] Info on the AX.25 Data Stream

From: "Terry Hock" <terry.h@netzero.net>
Date: Tue, 11 Dec 2001 17:22:41
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51564-2001.12.11-17.50.56--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am currently writing code for PIC chips in Micro Engineering Basic
(compiled), which is terrific! I would like to be able to send out GPS info
and a few data channels for WIN-APRS essentially like the PIC-E. Can
someone point me in the direction that describes in detail the actual
packet structure to be sent out. I do have the PIC-E software, but I do
not know C so it may be much faster to just learn the packet structure. Any
help would be appreciated. (I do not want to learn C, especially since the
BASIC compiler works so well)

Thanks,

Terry

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8. [picsig] Re: Info on the AX.25 Data Stream

From: John Hansen <hansen@fredonia.edu>
Date: Wed, 12 Dec 2001 10:58:57 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51677-2001.12.12-10.28.18--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/html

This is covered in a paper that I did for the DCC a couple of years ago
entitled:

PIC-et Radio: How to
Send AX.25 UI Frames Using Inexpensive PIC Microprocessors

You can find a copy on the tapr ftp site:

ftp.tapr. <ftp://ftp.tapr.org/>org <ftp://ftp.tapr.org/>
in the pub/wa0ptv directory. Look for the file called "DCC.zip".   If you want to know how to receive
AX.25, look for the file "DCC2.zip".

John W2FS

At 05:22 PM 12/11/2001 +0000, you wrote:

I am currently writing code for PIC chips in Micro Engineering Basic

(compiled), which is terrific! I would like to be able to send out GPS info

and a few data channels for WIN-APRS essentially like the PIC-E. Can

someone point me in the direction that describes in detail the actual

packet structure to be sent out. I do have the PIC-E software, but I do

not know C so it may be much faster to just learn the packet structure. Any

help would be appreciated. (I do not want to learn C, especially since the

BASIC compiler works so well)

Thanks,

Terry

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9. [picsig] PicBasic Pro vs. C compiler

From: David Beach <dbeach@blvl.igs.net>
Date: Wed, 12 Dec 2001 12:31:38 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51682-2001.12.12-11.59.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I don't want to start any Holy Wars BUT since I have neither compiler, know
no C and only a bit of BASIC, I would be interested in comments on how
people feel about these two different HLLs for programming PICs.

(I would prefer level-headed comments from people who have used these - not
a theoretical BASIC vs C rant which is likely not resolvable!)

David Beach
VE3STI

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10. [picsig] Re: PicBasic Pro vs. C compiler

From: Jeff King <jeff@aerodata.net>
Date: Wed, 12 Dec 2001 13:09:18 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51687-2001.12.12-12.38.43--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Sure. I can address this because I have done both. I went to C purely because
of the speed and easy of use. Their were no Basic PIC compilers when I started,
so I was using the basic stamp. If a basic compiler had existed, I likely would
not have gone to C. But I didn't have a choice.

And in retrospect, I am glad I went with C.

C is very good with bit orientated operations, which is critical with the PIC. Make
sure whatever compiler you chose can do bit and booleen operations well.

Also, a side benefit is your C embedded skills are very marketable in the workplace.
Made lots of money as a direct result of chosing that day to learn C instead of
waiting for a PIC basic compilier to show up.

So, if you'll only use it for a hobby, and can accept some limitations, then go
with either basic or C. If you want a marketable skill, go with C.

David Beach wrote:

> I don't want to start any Holy Wars BUT since I have neither compiler, know
> no C and only a bit of BASIC, I would be interested in comments on how
> people feel about these two different HLLs for programming PICs.
>

> (I would prefer level-headed comments from people who have used these - not
> a theoretical BASIC vs C rant which is likely not resolvable!)
>
> David Beach
> VE3STI

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11. [picsig] JAL, was PicBasic Pro vs. C compiler

From: Jeff King <jeff@aerodata.net>
Date: Wed, 12 Dec 2001 23:56:11 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51786-2001.12.12-23.25.03--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

David Beach wrote:

> (I would prefer level-headed comments from people who have used these - not
> a theoretical BASIC vs C rant which is likely not resolvable!)

Ran across this tonight and it is neither Basic or C, kinda Pascal like language
for the PIC and it is free.

http://www.xs4all.nl/~wf/wouter/pic/jal/index.html

Jal is an algol-style meekly typed block scoped language. It looks a lot like Pascal, but if you call it
 a
'microcontroller Ada' or a 'structured Basic' that's fine with me.

The Jal build-in types are bit and byte for run-time variables and 32 bit 'universal integer' for
compile-time
calculations. Expressions are roughly the same as in C, but an assignment is not an expression. The
available operators
are: + - / * % ! & | ^ < < >> == != < = and >=. Priority is as in C and () can be used for grouping.
There are no
restrictions on the complexity of expressions. The user can define operators, but the priorities are
fixed and the
build-in operators can not be re-declared.

Variables must be declared before use and can either be tied to a particular address or allocated by
compiler using the
static-stack algorithm. A declaration can be put wherever a statement can. The scope is from the
declaration to the end
of the smallest enclosing block.

Procedures and functions can have parameters. Each parameter has a name, a type, a mode (in, out or
in-out) and
optionally a default. Parameter passing is either by reference or by value-result (copying), whichever
suits the
compiler best. (Currently this is value-result except for volatile parameters which are passed as a
pointer to their
access routines.) A parameters can have a default, in which case no actual needs to be supplied.
Function calls can be
used in expressions, procedures can be called as stand-alone statements. When no parameters are supplied
 the () in a
procedure or function call can be omitted.

The statements are: assignment, if-then-elsif-else, for, loop and procedure call. The else part of an
if-then-else is
optional. A loop can have a count (for 10 loop ...), a condition (while ... loop ...) or be
unconditional (forever loop
...).

Put and get routines can be used to construct an interface which behaves like a variable. This is for
instance used in
jpic to hide the port value buffer which is needed to avoid the read-modify-write problem which is
inherent in the PIC
architecture.

In-line assembly is supported using the microchip syntax.

A CPU core simulator is build into the compiler. It is used to test the compiler. It might also be
usefull for debugging
and testing stand-alone code.

The compiler generates both a .hex file which can be downloaded directly to the target a .asm file which
 can be used
with the microchip development tools.

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12. [picsig] Re: PicBasic Pro vs. C compiler

From: Brian D Heaton <bdheaton@c4i2.com>
Date: 12 Dec 2001 23:43:22 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51804-2001.12.13-00.07.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Got any preferences on which of the available C compilers out there that
you prefer? I'm going through much the same though process.

73/N5VFF

On Wed, 2001-12-12 at 12:09, Jeff King wrote:
> Sure. I can address this because I have done both. I went to C purely because
> of the speed and easy of use. Their were no Basic PIC compilers when I started,
> so I was using the basic stamp. If a basic compiler had existed, I likely would
> not have gone to C. But I didn't have a choice.
>
> And in retrospect, I am glad I went with C.
>
>
> C is very good with bit orientated operations, which is critical with the PIC. Make
> sure whatever compiler you chose can do bit and booleen operations well.
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> Also, a side benefit is your C embedded skills are very marketable in the workplace.
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> waiting for a PIC basic compilier to show up.
>
> So, if you'll only use it for a hobby, and can accept some limitations, then go
> with either basic or C. If you want a marketable skill, go with C.
>
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>
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> David Beach wrote:
>
> > I don't want to start any Holy Wars BUT since I have neither compiler, know
> > no C and only a bit of BASIC, I would be interested in comments on how
> > people feel about these two different HLLs for programming PICs.
> >
> > (I would prefer level-headed comments from people who have used these - not
> > a theoretical BASIC vs C rant which is likely not resolvable!)
> >
> > David Beach
> > VE3STI
>
>
>
>
> ---
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13. [picsig] Re: PicBasic Pro vs. C compiler

From: David Beach <dbeach@blvl.igs.net>
Date: Thu, 13 Dec 2001 08:31:47 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51841-2001.12.13-07.57.32--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Having experience with none...

>From my survey of projects on the internet or QST, CCS seems to be the most
common. And, since C programs are not necessarily easily recompiled by other
compilers, popularity is important.

And, except for demo versions, I think it is about the cheapest in its
command line versions.
--
David Beach
VE3STI

> From: Brian D Heaton <bdheaton@c4i2.com>
> Date: 12 Dec 2001 23:43:22 -0600
> Subject: [picsig] Re: PicBasic Pro vs. C compiler
>
> Got any preferences on which of the available C compilers out there that
> you prefer? I'm going through much the same though process.
>

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14. [picsig] Re: PicBasic Pro vs. C compiler

From: Jeff King <jeff@aerodata.net>
Date: Thu, 13 Dec 2001 12:28:07 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51872-2001.12.13-11.57.22--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Brian D Heaton wrote:

> Got any preferences on which of the available C compilers out there that
> you prefer? I'm going through much the same though process.

Oh.... so you want me to start a holy war, huh?   ;-)

CCS, I've had it since the 1.x days. Looked serious at ByteCraft and less so
at HiTech (even recently) but everytime I always decide to stick with CCS. Money
not a issue at that time (well up to a $1000 I would spend) but stayed with CCS.
(which I believe starts at $99)

http://www.ccsinfo.com

I think the main reason is the libaries CCS comes with... makes development much
faster and easier. RS-232, I2C, X10, Keypad, delays, ect ect are all there to pick
and chose from.

All is not merry however. He tends to average a new release a week. What this tells
me is he is using his customer base as his testing department. I tend to lag behind on
releases, in particular when it is for a paying job. However, most of the bugs tend to
be just for the new chips (save the new 3.x releases which finally appear stable). Watching
the message board (also at the above site) is helpful as well.

Also, I've seen MicroChip start to embrace CCS, which is a good sign. Also, and this is
not relevent, I like CCS because it is a small company, but not a hobby company (i.e.
this is the guys main job.... his name is Mark). I think they have 2 or 3 employees.
While one may think a big company is more stable, I've found that not to be a good metric.

There are also other C compilers out there for the PIC, that are cheap/free, but I think
the small amount CCS charges is worth it.

73

Jeff

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15. [picsig] Re: PicBasic Pro vs. C compiler

From: Brian D Heaton <bdheaton@c4i2.com>
Date: 13 Dec 2001 12:18:59 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-51879-2001.12.13-12.43.19--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Sounds like CCS is a winner. I just took a quick pass over the web site
and missed the included libraries. It looks like CCS will be the way to
go. Now I just have to get relocated to Georgia and I can start playing
again. <g>

73/N5VFF

On Thu, 2001-12-13 at 11:28, Jeff King wrote:
>
>
> Brian D Heaton wrote:
>
> > Got any preferences on which of the available C compilers out there that
> > you prefer? I'm going through much the same though process.
>
>
>
> Oh.... so you want me to start a holy war, huh?   ;-)
>
>
> CCS, I've had it since the 1.x days. Looked serious at ByteCraft and less so
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>
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>
> I think the main reason is the libaries CCS comes with... makes development much
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>
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> be just for the new chips (save the new 3.x releases which finally appear stable). Watching
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>
> Also, I've seen MicroChip start to embrace CCS, which is a good sign. Also, and this is
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> this is the guys main job.... his name is Mark). I think they have 2 or 3 employees.
> While one may think a big company is more stable, I've found that not to be a good metric.
>
> There are also other C compilers out there for the PIC, that are cheap/free, but I think
> the small amount CCS charges is worth it.
>
> 73
>
> Jeff
>
>
>
> ---
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>
>

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16. [picsig] Guess what Santa left?

From: David Beach <dbeach@blvl.igs.net>
Date: Sun, 30 Dec 2001 20:21:27 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-54257-2001.12.30-19.47.34--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Santa (after some pretty heavy hints) left the CCS C Compiler (PCM version)
for me under our tree. Hooray! Thanks to all who replied to my questions on
which compiler to buy. I conveyed your opinions to Santa.

I will run it from within MPLAB (I can't see any particular advantages in
using it via command line - are there any?) but my Windows 98 machine is
currently a bit sick so I think I will do a Windows reinstall - and thus
delay trying the new compiler. (I have a Mac for most of my day-to-day stuff
- Windows sure seems to require a lot of time-consuming fiddling!) But, I
will get to it later in the dark nights of January!

Best of the season to all!

--
David Beach VE3STI
Picton, Ontario

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February 2002

Original source file: picsig.0202
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0202

1. [picsig] [OT] ICOM IC-25A schematic needed

From: "Marcelo" <mark@cpovo.net>
Date: Tue, 12 Feb 2002 10:23:47 -0200
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-62513-2002.02.12-06.55.03--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

I received two Icom IC-25A radios to build a Packet node,
but they are not functioning.

So I need the schematic diagram to repair them.

Any chance anyone have a copy scanned ?

Thanks in advance.

73, Marcelo - PY3SS
http://py3ss.cjb.net

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2. [picsig] RE: [OT] ICOM IC-25A schematic needed

From: "Robert Donnell" <bobdonnell@arkalmus.com>
Date: Tue, 12 Feb 2002 11:14:27 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-62595-2002.02.12-13.45.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Marcelo and all,

I don't have schematics for the IC-25, but I do know that they do not have
internal memory batteries for storing settings, such as the memories and VFO
settings. So if power to the radio is lost, the radio reverts to its
initial frequency.

Maybe to get back on topic, a PIC can be programmed to reset the radio
frequency after a power loss. I think the "best" way to accomplish this
might include decoding the radio's multiplex display data, so that the PIC
can determine whether the radio frequency isn't correct, so it's time to
correct it, and to store the correct value, so that a glitch that does not
result in a clean reset can be accurately corrected. Another function might
be to inhibit transmit if the radio is not set to the correct frequency.

73, Bob

Robert Donnell, KD7NM   (425) 741-0999
14507 Madison Way   mailto:kd7nm@pugetsound.net
Lynnwood, WA 98037
       Western Washington Amateur IP Address Coordinator

> -----Original Message-----
> From: bounce-picsig-17770@lists.tapr.org
> [mailto:bounce-picsig-17770@lists.tapr.org]On Behalf Of Marcelo
> Sent: Tuesday, February 12, 2002 4:24 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] [OT] ICOM IC-25A schematic needed
>
>
>
> Hi,
>
> I received two Icom IC-25A radios to build a Packet node,
> but they are not functioning.
>

> So I need the schematic diagram to repair them.
>
> Any chance anyone have a copy scanned ?
>
> Thanks in advance.
>
> ---
> 73, Marcelo - PY3SS
> http://py3ss.cjb.net
> --------------------
>
>
> ---
> You are currently subscribed to picsig as: kd7nm@pugetsound.net
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>
>

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3. [picsig] RE: [OT] ICOM IC-25A schematic needed

From: "Marcelo" <mark@cpovo.net>
Date: Tue, 12 Feb 2002 20:49:28 -0200
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-62619-2002.02.12-17.20.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks.

On 12 Feb 2002 at 11:14, Robert Donnell wrote:

> Hi Marcelo and all,
>
> I don't have schematics for the IC-25, but I do know that they do not have
> internal memory batteries for storing settings, such as the memories and VFO
> settings. So if power to the radio is lost, the radio reverts to its initial
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> Maybe to get back on topic, a PIC can be programmed to reset the radio
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> correct it, and to store the correct value, so that a glitch that does not
> result in a clean reset can be accurately corrected. Another function might be
> to inhibit transmit if the radio is not set to the correct frequency.
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> 73, Bob
>
> --
> Robert Donnell, KD7NM   (425) 741-0999
> 14507 Madison Way   mailto:kd7nm@pugetsound.net
> Lynnwood, WA 98037
>   Western Washington Amateur IP Address Coordinator
> --
>
> > -----Original Message-----
> > From: bounce-picsig-17770@lists.tapr.org
> > [mailto:bounce-picsig-17770@lists.tapr.org]On Behalf Of Marcelo
> > Sent: Tuesday, February 12, 2002 4:24 AM
> > To: TAPR PIC Development Special Interest Group
> > Subject: [picsig] [OT] ICOM IC-25A schematic needed
> > >
> > >
> > >
> > Hi,
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> > 73, Marcelo - PY3SS
> > http://py3ss.cjb.net
> > --------------------
> >
> >
> > ---
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> >
>
>
> ---
> You are currently subscribed to picsig as: mark@cpovo.net
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>

Marcelo Puhl
Mensa Brasil member
http://www.mensa.com.br

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4. [picsig] Interfacing Problem

From: "David Huryn" <dhuryn@hotmail.com>
Date: Thu, 14 Feb 2002 7:14:46
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-62991-2002.02.14-07.46.03--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have recently assembled my PIC-E encoder. All voltage checks were
correnct at JP4, U1 pin 14, and U3 pin 16. I have sucessully loaded and ran
picediag without a radio connected and saw the LED's light with the
appropriate switch setting.

I have interfaced my ICOM 2800-H radio and ICOM HM-98 microphone to the
PIC-E. When running picediag, the LED's light with the appropriate switch
settings, but the radio does not transmit. With both switches in the off
postion, the radio and microphone all funtion as they would if not
interfaced with the PIC-E. I have checked and rechecked all the jumper
connections on J3 and J4/J5/J6. All are as they should be based upon the
ICOM and PIC-E manuals. The PIC-E is being powered by a 13v 30amp power
supply, so I do not beleive power is the problem.

Can anyone offer a suggestion as to where to begin in finding the problem?
Any help would be greatly appreciated.

Thank you in advance;

David
KC2ILK

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5. [picsig] Re: Interfacing Problem

From: Ken Isom <isomk@airmail.net>
Date: Thu, 14 Feb 2002 08:33:33 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-63000-2002.02.14-09.04.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

David,

Here's some ideas:

1. with your gps unit attached, do you get the yellow ready
   light after a few minutes? I attached a low current LED
   across input from the GPS so every second I can tell if
   the GPS is outputting data as needed. The PIC-E will not
   xmit until valid GPS data is received.
2. Grab a scope and see if you really have following:

a. GPS input on proper pin of uP every 1 second
b. If the Ready light is on then every time you get a RED
   Xmit indication you should be able to monitor both the
   keying circuit for a DC voltage drop and the audio output
   to the mic input.

3. I had problems with RF from my radio locking up the PIC-E
   and solved it by adding a reed relay in the PTT circuitry
   and a small transformer inline with the mic circuit...
   That essentially isolated any RF on the Ground or other leads
   from getting into the PIC-E and causing the uP to lockup.

Good luck,

Ken
KD5AIA

At 07:14 AM 2/14/02, you wrote:
>I have recently assembled my PIC-E encoder. All voltage checks were
>correnct at JP4, U1 pin 14, and U3 pin 16. I have sucessully loaded and ran
>picediag without a radio connected and saw the LED's light with the
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>ICOM and PIC-E manuals. The PIC-E is being powered by a 13v 30amp power
>supply, so I do not beleive power is the problem.
>
>Can anyone offer a suggestion as to where to begin in finding the problem?
>Any help would be greatly appreciated.
>
>Thank you in advance;
>
>David
>KC2ILK
>
>---
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>

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6. [picsig] RE: Interfacing Problem

From: "Robert Donnell" <bobdonnell@arkalmus.com>
Date: Thu, 14 Feb 2002 15:49:00 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-63085-2002.02.14-18.20.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi David,

You may need a scope, or you may not be able to use the PIC-E and the
radio's microphone at the same time. It is my understanding Icom radios now
use serial data signaling from the microphone to the radio, primarily to
support the remote control functions. If the radio determines that a
"smart" microphone is connected, it expects to use serial data signalling
for all functions, including PTT. If the smart mike isn't found, the radio
may revert to normal interpretation of the PTT signal. If I recall
correctly, a friend with an IC-2100 ran into this problem. If this is the
case, the alternatives are probably:
1) Switch cables between APRS and voice operation using the existing mike.
2) Wire a "dumb" conventional mike to the PIC-E and use the radio without
the smart mike when operating your tracker.

Good luck, and 73

Bob, KD7NM

Robert Donnell, KD7NM   (425) 741-0999
14507 Madison Way   mailto:kd7nm@pugetsound.net
Lynnwood, WA 98037
       Western Washington Amateur IP Address Coordinator

> -----Original Message-----
> From: bounce-picsig-17770@lists.tapr.org
> [mailto:bounce-picsig-17770@lists.tapr.org]On Behalf Of David Huryn
> Sent: Thursday, February 14, 2002 7:15 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Interfacing Problem
>
>
> I have recently assembled my PIC-E encoder. All voltage checks were
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> Can anyone offer a suggestion as to where to begin in
> finding the problem?
> Any help would be greatly appreciated.
>
> Thank you in advance;
>
> David
> KC2ILK
>
> ---
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7. [picsig] RE: Interfacing Problem

From: "David" <dhuryn@hotmail.com>
Date: Fri, 15 Feb 2002 00:24:28 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-63144-2002.02.14-23.55.48--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thank you Ken and Bob for responding to my questions. I very much appreciate
your help.

Bob, I believe that you are correct regarding the "smart" microphone. I
connected the PIC-E to just the radio (no mic connected) and was able to
transmit the 1200bps tone while running PICEdiag. I then loaded GPS-E-2,
connected my GPS, and was able to transmit APRS packets in automatic mode. I
will test with a "dumb" mic once I get a hold of one.

Once again, thank you both for responding to my question.

David
KC2ILK

----- Original Message -----
From: "Robert Donnell" <bobdonnell@arkalmus.com>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Thursday, February 14, 2002 6:49 PM
Subject: [picsig] RE: Interfacing Problem

> Hi David,
>
> You may need a scope, or you may not be able to use the PIC-E and the
> radio's microphone at the same time. It is my understanding Icom radios
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> 1) Switch cables between APRS and voice operation using the existing mike.
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> the smart mike when operating your tracker.
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> Good luck, and 73
>
> Bob, KD7NM
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> --
> Robert Donnell, KD7NM   (425) 741-0999
> 14507 Madison Way   mailto:kd7nm@pugetsound.net
> Lynnwood, WA 98037
>   Western Washington Amateur IP Address Coordinator
> --
>
> > -----Original Message-----
> > From: bounce-picsig-17770@lists.tapr.org
> > [mailto:bounce-picsig-17770@lists.tapr.org]On Behalf Of David Huryn
> > Sent: Thursday, February 14, 2002 7:15 AM
> > To: TAPR PIC Development Special Interest Group
> > Subject: [picsig] Interfacing Problem
> >
> >
> > I have recently assembled my PIC-E encoder. All voltage checks were
> > correnct at JP4, U1 pin 14, and U3 pin 16. I have sucessully
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> > David
> > KC2ILK
> >
> > ---
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> >
> >
>
>
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> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

8. [picsig] F Y I USBid next auction has some PIC16LF84-04 for sell.

From: Ken Isom <isomk@airmail.net>
Date: Wed, 20 Feb 2002 15:21:06 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-64546-2002.02.21-03.26.16--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Return-Path: <sbam@usbid.com>

>From: sbam@usbid.com
>Subject: _USBid OEM Auction -- 02.20.02
>Organization:
>Date: Wed, 20 Feb 2002 13:47:25 -0600
>
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><HEAD>
><TITLE>OEM Liquidation</TITLE>
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>TD { color : black; font-size : 8pt; font-family : Arial}
></style>
></HEAD>
>
><BODY>
>
>Dear Ken,
><P>
>We are going to keep at it until ALL STOCK is sold, NO RESERVE PRICE is
being set!
>This auction <B>ends Friday, February 22nd at 4:00PM EST</B>.
></P>
><B>Check below for GREAT AUCTION DEALS!</B>
><P>
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><TR STYLE="FONT-WEIGHT: bold; BACKGROUND: lightsteelblue">
><TD NOWRAP>Part No.</TD>
><TD NOWRAP>Description</TD>
><TD NOWRAP>Manufacturer</TD>
><TD NOWRAP>Quantity</TD>
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><TD NOWRAP>Current Bid</TD>
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><TD ALIGN="center" VALIGN="top">106,000</TD>
><TD ALIGN="center" VALIGN="top">$0.08</TD>
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><TD NOWRAP VALIGN="top">TAJB475K020R</TD>
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><TD NOWRAP ALIGN="center" VALIGN="top"><A
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><TR>
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><TD VALIGN="top">22MHz Crystal Oscillator Module</TD>
><TD VALIGN="top">Raltron</TD>
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HREF="HTTP://WWW.USBID.COM/ABOUT/AUCTION.CFM?ID=07"><B>CLICK HERE</B></A></TD>
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><TR>
><TD NOWRAP VALIGN="top">DAC2450CT1</TD>
><TD VALIGN="top">Antenna Element 2.45GHz</TD>
><TD VALIGN="top">Toko</TD>
><TD ALIGN="center" VALIGN="top">7,600</TD>
><TD ALIGN="center" VALIGN="top">$0.01</TD>
><TD NOWRAP ALIGN="center" VALIGN="top"><A
HREF="HTTP://WWW.USBID.COM/ABOUT/AUCTION.CFM?ID=08"><B>CLICK HERE</B></A></TD>
></TR>
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><TR>
><TD NOWRAP VALIGN="top">PIC16LF84-04/SO</TD>
><TD VALIGN="top">PIC MicroController</TD>
><TD VALIGN="top">MicroChip</TD>
><TD ALIGN="center" VALIGN="top">5,741</TD>
><TD ALIGN="center" VALIGN="top">$0.03</TD>
><TD NOWRAP ALIGN="center" VALIGN="top"><A
HREF="HTTP://WWW.USBID.COM/ABOUT/AUCTION.CFM?ID=09"><B>CLICK HERE</B></A></TD>
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>
><TR>
><TD NOWRAP VALIGN="top">STJW-690-RTR</TD>
><TD VALIGN="top">SMD Pushbutton</TD>
><TD VALIGN="top">Bourns</TD>
><TD ALIGN="center" VALIGN="top">30,600</TD>
><TD ALIGN="center" VALIGN="top">$0.005</TD>
><TD NOWRAP ALIGN="center" VALIGN="top"><A
HREF="HTTP://WWW.USBID.COM/ABOUT/AUCTION.CFM?ID=09"><B>CLICK HERE</B></A></TD>
></TR>
>
></TABLE>
```

>
><DIV>
>Good luck to all bidders!

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9. [picsig] Motorola MDC-1200 protocol ?

From: "Marcelo" <mark@cpovo.net>
Date: Sat, 23 Feb 2002 16:01:19 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-65007-2002.02.23-13.33.16--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

I've searched the net for Motorola MDC-1200 protocol description but
found nothing useful.

Do you know if it is available ?

I want to make a decoder for it.

Thanks.

Marcelo Puhl
Mensa Brasil member
http://www.mensa.com.br

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10. [picsig] Re: Motorola MDC-1200 protocol ?

From: Henry Carl Ott <carlott@interport.net>
Date: Sat, 23 Feb 2002 14:13:06 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-65011-2002.02.23-13.45.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

It's propriety. Motorola never released the spec.
  Some REAL sketchy Info here:
http://www.batlabs.com/mdc1200.html

  It's better then nothing.

-carl   N2RVQ

At 04:01 PM 2/23/2002, you wrote:

>Hi,
>
>I've searched the net for Motorola MDC-1200 protocol description but
>found nothing useful.
>
>Do you know if it is available ?
>
>I want to make a decoder for it.
>
>Thanks.
>---
>Marcelo Puhl
>Mensa Brasil member
>http://www.mensa.com.br
>

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11. [picsig] Re: Motorola MDC-1200 protocol ?

From: "Marcelo" <mark@cpovo.net>
Date: Sat, 23 Feb 2002 16:37:43 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-65014-2002.02.23-14.09.22--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks Carl. That the only info I could find, too.

On 23 Feb 2002 at 14:13, Henry Carl Ott wrote:

> It's propriety. Motorola never released the spec.
>   Some REAL sketchy Info here:
> http://www.batlabs.com/mdc1200.html
>
>   It's better then nothing.
>
> -carl   N2RVQ
>
>
>
> At 04:01 PM 2/23/2002, you wrote:
>
> >Hi,
> >
> >I've searched the net for Motorola MDC-1200 protocol description but
> >found nothing useful.
> >
> >Do you know if it is available ?
> >
> >I want to make a decoder for it.
> >
> >Thanks.
> >---
> >Marcelo Puhl
> >Mensa Brasil member
> >http://www.mensa.com.br
> >
>
>
> ---
> You are currently subscribed to picsig as: mark@cpovo.net
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>

73, Marcelo - PY3SS
http://py3ss.cjb.net

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12. [picsig] FEC ?

From: "Marcelo" <mark@cpovo.net>
Date: Tue, 26 Feb 2002 00:15:29 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-65380-2002.02.25-21.47.28--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

I need the advise of the experts on this list.

I have 16 bits of information (from a PIC) to transmit via radio.
I also have as much time as necessary to send more bits for FEC
purposes. So, what will be the encoding system that result in the
best BER ? The final packet length may be as long as 200 bits.

Thanks.

73, Marcelo - PY3SS
http://py3ss.cjb.net

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13. [picsig] GPS Data Logger

From: "Peter Bennett" <runtime@intelnet.net.gt>
Date: Tue, 26 Feb 2002 15:26:27 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-65534-2002.02.26-15.57.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello list,

I would like your help in the following:

We have a PIC attached to a GPS and are storing the readings to FRAM memory,
now we want to be able to transmit the data in X25 protocol, can anyone
please describe the process to do that?

Thank you in advance
Peter Bennett

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14. [picsig] Re: GPS Data Logger

From: "HSHK" <hshk@ix.netcom.com>
Date: Tue, 26 Feb 2002 16:29:08 -0500 (Eastern Standard Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-65538-2002.02.26-16.04.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You can use three pins of the pic to generate packet.

Email me direct for the files.

Bill
ka8vit@ix.netcom.com

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Tuesday, February 26, 2002 04:26:09 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] GPS Data Logger

Hello list,

I would like your help in the following:

We have a PIC attached to a GPS and are storing the readings to FRAM memory,
now we want to be able to transmit the data in X25 protocol, can anyone
please describe the process to do that?

Thank you in advance
Peter Bennett

You are currently subscribed to picsig as: hshk@ix.netcom.com
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

.

15. [picsig] RE: GPS Data Logger

From: "Rich Carter" <ke1ev@arrl.net>
Date: Wed, 27 Feb 2002 10:38:00 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-65672-2002.02.27-10.06.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Peter
There's lots of stuff written about it. Some good stuff in old TAPR
publications.

At its simplest, the stream is transmitted as a series of tones. Two
frequencies are used. A tone period is a period of time that the frequency
is constant. A zero requires a tone change. A one keeps the tone the same.
Each tone period represents a zero folowed by zero or more ones. Each bit
period is 1/1200 sec. Two tones in a row of one period length each
represent two zeros. A single tone of length three represents a zero
followed by two ones; etc...

To prevent problems in drift, tone periods are restricted to a length of
less than six bits (a zero followed by five ones). If a transmission
requires a tone period in excess of this, a zero is stuffed into the stream.
The receiver must pull it out.

Transmission of 0x0FF would be as follows (where A is tone1 and B is tone2)
ABABBBBBBAAAA
This receives as
0000111110111
Pull out the stuffed zero
000011111111

Each packet starts and ends with a special flag with a tone length of seven.
It is suggested that the packet start and end with more than one flag to
give the receiver time to sync up.

tones longer than seven represent an abort.

Rich
KE1EV

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Peter Bennett
Sent: Tuesday, February 26, 2002 4:26 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] GPS Data Logger

Hello list,

I would like your help in the following:

We have a PIC attached to a GPS and are storing the readings to FRAM memory,
now we want to be able to transmit the data in X25 protocol, can anyone
please describe the process to do that?

Thank you in advance
Peter Bennett

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---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

16. [picsig] RE: GPS Data Logger

From: John Hansen <hansen@fredonia.edu>
Date: Wed, 27 Feb 2002 11:25:15 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-65683-2002.02.27-10.58.38--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You might want to see the article I did for the DCC a few years back on how
to transmit AX.25 frame with a PIC. You can download it by anonymous ftp
from the TAPR ftp site: ftp.tapr.org You'll find it in the pub/wa0ptv
directory in a file called DCC.ZIP

John W2FS

>-----Original Message-----
>From: bounce-picsig-21297@lists.tapr.org
>[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Peter Bennett
>Sent: Tuesday, February 26, 2002 4:26 PM
>To: TAPR PIC Development Special Interest Group
>Subject: [picsig] GPS Data Logger
>
>
>Hello list,
>
>I would like your help in the following:
>
>We have a PIC attached to a GPS and are storing the readings to FRAM memory,
>now we want to be able to transmit the data in X25 protocol, can anyone
>please describe the process to do that?
>
>Thank you in advance
>Peter Bennett
>
>
>
>---
>You are currently subscribed to picsig as: KE1EV@ARRL.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>
>
>---
>You are currently subscribed to picsig as: hansen@fredonia.edu
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
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17. [picsig] RE: GPS Data Logger

From: "David R. Andersen" <k0rx@uiowa.edu>
Date: Wed, 27 Feb 2002 11:13:40 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-65689-2002.02.27-11.45.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rich - this is an excellent short description.

>Transmission of 0x0FF would be as follows (where A is tone1 and B is tone2)
>ABABBBBBBAAAA
>This receives as
>0000111110111
>Pull out the stuffed zero
>000011111111
>
One minor point, since a tone change encodes a zero and no change
encodes a one, 0x0FF can also be encoded as
BABAAAAAABBBB. The decode logic is the same as Rich gave above.

Dave K0RX

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18. [picsig] Re: Motorola MDC-1200 protocol ?

From: "Francisco Ybarra" <ybarra_francisco@hotmail.com>
Date: Thu, 28 Feb 2002 21:51:15 +0000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-65891-2002.02.28-16.23.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/html

Hable con sus amigos en línea, pruebe MSN Messenger: http://messenger.msn.es
<http://g.msn.com/1HM107001/h>

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March 2002

Original source file: picsig.0203
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0203

1. [picsig] FW: PIC-E-II development help request

From: "Rich Carter" <ke1ev@arrl.net>
Date: Mon, 4 Mar 2002 14:40:31 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66500-2002.03.04-14.09.20--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

A small group of us are working on a next generation PIC-E. The new board will both send and receive packets. It is based on a Microchip 16F876. We are reaching the end of development, but could use a little help completing the project. We would like to complete the first release before Dayton.

Two software applications are currently under development. One application is targeted for a weather station. The second is a general purpose framework. A copy of the software functional spec for the second application is attached.

We need host tools developed to support the kit. We could use help in developing this software. At a minimum, we would like support for a Windows platform by Dayton. We would like to add support for other platforms too.

We could use some help packaging the kit. This involves completing the design of an enclosure, preparing assembly instructions, and assisting with board layout.

If you are interested in helping out on the project, and have the time and skills to support our short schedule, please contact me.

We plan to support integration of the PIC-E-II with existing tools such as APRS-Dos, APRS-CE, APRS-SA, etc. Developers of those applications are welcome to contact me with comments and suggestions.

Open source with restrictions will be provided to allow customization of the kit at a later date. Software is written in C using CCS. If you would like to get your hands under the hood and write your own application, please be patient. We hope that the kit will be available soon.

Rich Carter - KE1EV

_____

PIC-E-II Software Functional Spec
(updated 2/20/2002)

Overview
This document defines the software functional requirements for the KE1EV implementation of the PIC-E-II APRS TNC.

The PIC-E-II will function as a stand-alone APRS station. It will operate in the following basis modes:

1. Startup in this mode of operation, the PIC-E-II will print out a startup banner including software version. It will then enter the system default mode of operation (see configuration parameters).
2. Idle in this mode of operation, the PIC-E-II will monitor the terminal port for user commands.
3. Self-test in this mode of operation, the PIC-E-II will test external memory and peripheral interfaces.
4. KISS in this mode of operation, the PIC-E-II will send and receive packets to a host system using the KISS protocol.
5. APRS in this mode of operation, the PIC-E-II will transmit position reports at a programmable rate. It will receive and log messages that are addressed for the station.
6. Program in this mode of operation, the PIC-E-II will accept and load a new image.
7. Update in this mode of operation, the PIC-E-II will accept and load configuration parameters.
8. Monitor in this mode of operation, the PIC-E-II will provide a user interface to allow examining RAM, ROM, and external RAM.

Note: Due to program memory size constraints, it may not be possible to support all these modes in one load image. At this point, it looks

possible.

Idle
During idle, the PIC-E-II will monitor the terminal for a user command. User commands will consist of one-byte codes defined as follows:
1. T □ Test
2. K □ KISS
3. A □ APRS
4. U □ Update
5. M □ Monitor

When a command is recognized, the system will exit idle and enter the commanded mode. If a command is not recognized, a warning message will be displayed and the system will remain in idle. An example warning message is shown below.

??? [TKAUM]

Self Test
Self-test mode will load a test pattern into external memory and verify contents. It will forward characters received on the terminal port to the sensor port, implementing hardware flow control to prevent data loss. It will forward characters received on the sensor port to the terminal port. It will send a test pattern to the modem port to allow level adjustment. Self-test mode will terminate when an escape character is received on the terminal port. When received, the system will enter the idle mode.

KISS
During Kiss mode, the PIC-E-II will read packets detected on the modem port. It will compute a CRC on the received packet and compare it with the packet FCS. If the CRCs do not match, the packet will be discarded. Otherwise, it will examine the destination address for a match with station ID. If a match is found, the packet will be formatted as a KISS packet and forwarded to the host system via the terminal port. If the packet is not addressed for this station, the first entry in the path will be examined for a match with the station alias. If a match is detected, the packet will be reformatted and retransmitted. Packets received from the host will be transmitted through the modem port. Kiss mode will terminate when directed by a return command packet from the host or when an escape character is received on the terminal port outside a packet. When received, the system will enter the idle mode.

In addition to data packets, the following command packets will be recognized and processed by the system.
1. TX delay
2. Persistence
3. Slot time
4. TX tail
5. Full Duplex
6. Set Hardware
7. Return

Note: Storage will be provided for buffers with a maximum size of 1024 bytes. This will support KISS packets of a length of 1022 bytes max. Two transmit and two received buffers are planned. Hardware follow control is supported to control data flow from the host to the target. Support is not provided for flow control from the target to the host.

APRS
While in APRS mode of operation, the system will operate as either a mobile or fixed station. As a mobile station, it will receive position reports from an external NMEA-183 compliant GPS sensor at 4800 baud. As a fixed station, it will use a fixed position defined in system configuration parameters. It will format and send a position report at a programmable interval. This message will use the mic-e format. It will read packets detected on the modem port. It will compute a CRC on the received packet and compare it with the packet FCS. If the CRCs do not match, the packet will be discarded. Otherwise, it will examine the destination address for a match with station ID. If a match is found, the packet will be logged in memory for later retrieval by the host system. An external beeper will briefly sound to indicate data reception. A front-panel lamp will blink to indicate the number or stored messages. A notification will be sent to the host system (optionally connected) in the form of a single byte code byte (0x11). An auto-reply message will be sent. If the packet is not addressed for this station, the first entry in the path will be examined for a match with the station alias. If a match is detected, the packet will be reformatted and retransmitted. When a query request is received from the terminal port, stored packets will be forwarded to the host system using the KISS protocol. A query request will consist of a single byte (0x11). When a query request is received, the system will send the oldest stored packet to the host and then delete it. If additional packets are stored, the packet will be followed by another ready byte code (0x11). If no packets are stored, an empty byte code will be returned (0X13). Up to sixteen

packets will be stored, each with a maximum length of 256 bytes. When used as a mobile station, the system position received by the GPS can be saved as a configuration parameter. When an □S□ character is received on the serial port in mobile operation, the current position will be saved. APRS mode will terminate when an escape character is received on the terminal port. When received, the system will enter the idle mode.

(Future enhancement) A mechanism for a host system to send a message during APRS operation should be provided. This should allow the PIC-E-II to format a basic packet using the destination address and payload provided by the host system.

(Future enhancements) Various sensors other than a simple GPS could be connected to the PIC-E-II, including integrated instruments (NMEA instruments that include weather data) and weather stations.

(Future enhancement) Sending the position of received packets out to the GPS using WPL NMEA sentence.

(Future enhancement) Sending received NMEA payload data out the terminal port for remote processing.

Note: It is possible to recover stored packets after re-powering. I may add this feature. The FRAM chip that we selected has 8Kbytes of non volatile storage. 4 K is assigned to KISS packet buffers and the remaining 4 K is assigned to APRS packet storage. These modes are mutually exclusive, so some savings could be achieved by combining these buffers.

Update

The Update mode of operation will allow system configuration parameters stored in non-volatile memory to be updated. During an update, the host system will send these parameters to the PIC-E-II using an S-record format. The following configuration parameters will be stored.

1. Callsign
2. Position Lat
3. Position Lon
4. Status Text
5. Group Code
6. Packet Path
7. Transmit Method
8. Position Method
9. Symbol Code
10. Symbol Table ID
11. Transmit Rate
12. My Alias
13. Mode (Mobile, Fixed)
14. TX delay
15. Persistence
16. Slot time
17. TX tail
18. Full Duplex
19. Default system mode (T,K,A,M)
20. Beep (Mine, All, None)
21. Beacon (On, Off)

Update mode will terminate when an escape character is received on the terminal port. When received, the system will enter the idle mode.

(Future enhancement) A provision to upload configuration parameters to a host system would be useful.

Monitor

The monitor mode will allow the user to examine internal and external memory. The system will accept monitor commands from the terminal input. Commands will consist of a single command character followed by a hex number terminated by □CR□. Commands recognized are listed below.

1. Display RAM □D□
2. Display EEPROM □E□
3. Display External Memory □X□

If a command is not recognized, a question mark will be displayed. Monitor mode will terminate when an escape character is received on the terminal port. When received, the system will enter the idle mode.

Loader

Program mode will be entered when the system powers up with a program jumper in place. This code will reside on the last page of program memory, space normally assigned to the ICD. It will be built as a separate image. When entered, the system will display a startup banner including the version number of the loader program. It will accept a program file from the system

terminal port using an S-record format. It will load this image into
program space, protecting its own address space and address zero from being
overwritten. If space permits, it will also program EEPROM with
non-volatile parameters. Program mode will terminate when an escape
character is received on the terminal port. When received, the system will
boot the loaded image.

NB: Kits will be shipped with the loader image burned into flash.
Support Software
The following support software will be required for system operation.
APRS Host Software
This software will allow a host computer system to connect to the PIC-E-II
to allow examining stored messages and to set configuration parameters.
Received packets should be parsed and displayed in an intelligent fashion.
A clear display should be provided to set configuration parameters. This
software will be described in its own functional spec. Suggested host
platforms include Windows, CE, Palm, and Unix variants.
Host Loader
This software will allow a user to re-flash the program image in the
PIC-E-II. A simple terminal program such as Hyperterminal or tip might be
sufficient to support this feature.   Some sensible method to set
configuration parameters is needed however. If this APRS host software is
not provided in the initial release, the loader will need to support this.
Gary□s application needs a method to load configuration parameters too, and
his software doesn□t use the APRS host software. Some coordination is
needed here.

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] Re: FW: PIC-E-II development help request

From: "Curt, WE7U" <archer@eskimo.com>
Date: Mon, 4 Mar 2002 13:31:47 -0800 (PST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: "Curt Mills, WE7U" <archer@eskimo.com>
Message-ID: <LYR6890-66527-2002.03.04-16.05.18--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Mon, 4 Mar 2002, Rich Carter wrote:

> A small group of us are working on a next generation PIC-E. The new board
> will both send and receive packets.

I'm all for that. We need an open-source TNC.

> We plan to support integration of the PIC-E-II with existing tools such as
> APRS-Dos, APRS-CE, APRS-SA, etc. Developers of those applications are
> welcome to contact me with comments and suggestions.

I'm one of the Xastir developers. What sort of special support might it
need in the application? I don't have time right now to look through your
functional spec, but I'll try to do so.

> Open source with restrictions

Depending on the restrictions, you might not be able to call it Open-Source
at all. Be careful with the term. It means very specific things.

Curt, WE7U   archer@eskimo.com
Arlington, WA, USA   http://www.eskimo.com/~archer
"Lotto: A tax on people who are bad at math." -- unknown
"Windows: Microsoft's tax on computer illiterates." -- WE7U

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] Re: FW: PIC-E-II development help request

From: James Paul <jamesp@intertex.net>
Date: Mon, 4 Mar 2002 15:37:21 +0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: ke1ev@arrl.net
Message-ID: <LYR6890-66528-2002.03.04-16.15.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rich,

I'd be willing to assist in the packaging of the unit. In my work, I
do packaging for some of the prototype units I develop and assemble.
Let me know what I need to do.

Regards,

Jim KA9QHR

> A small group of us are working on a next generation PIC-E. The new
> board will both send and receive packets. It is based on a Microchip
> 16F876. We are reaching the end of development, but could use a little
> help completing the project. We would like to complete the first
> release before Dayton.
>
> Two software applications are currently under development. One
> application is targeted for a weather station. The second is a general
> purpose framework. A copy of the software functional spec for the
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> application is attached.
>
> We need host tools developed to support the kit. We could use help in
> developing this software. At a minimum, we would like support for a
> Windows platform by Dayton. We would like to add support for other
> platforms too.
>
> We could use some help packaging the kit. This involves completing the
> design of an enclosure, preparing assembly instructions, and assisting
> with board layout.
>
> If you are interested in helping out on the project, and have the time
> and skills to support our short schedule, please contact me.
>
> We plan to support integration of the PIC-E-II with existing tools such
> as APRS-Dos, APRS-CE, APRS-SA, etc. Developers of those applications
> are welcome to contact me with comments and suggestions.
>
> Open source with restrictions will be provided to allow customization
> of the kit at a later date. Software is written in C using CCS. If
> you would like to get your hands under the hood and write your own
> application, please be patient. We hope that the kit will be available
> soon.
>
> Rich Carter - KE1EV
>
>
>

> _____
> PIC-E-II Software Functional Spec
> (updated 2/20/2002)
>
> Overview
> This document defines the software functional requirements for the
> KE1EV implementation of the PIC-E-II APRS TNC.
>
> The PIC-E-II will function as a stand-alone APRS station. It will
> operate in the following basis modes:
>
> 1. Startup □ in this mode of operation, the PIC-E-II will print out a
> startup banner including software version. It will then enter the
> system default mode of operation (see configuration parameters).
> 2. Idle □ in this mode of operation, the PIC-E-II will monitor the
> terminal port for user commands.
> 3. Self-test □ in this mode of operation, the PIC-E-II will test
> external memory and peripheral interfaces.
> 4. KISS □ in this mode of operation, the PIC-E-II will send and receive
> packets to a host system using the KISS protocol.
> 5. APRS □ in this mode of operation, the PIC-E-II will transmit
> position reports at a programmable rate. It will receive and log

> messages that are addressed for the station.
> 6.   Program in this mode of operation, the PIC-E-II will accept and
> load a new image.
> 7.   Update in this mode of operation, the PIC-E-II will accept and
> load configuration parameters.
> 8.   Monitor in this mode of operation, the PIC-E-II will provide a
> user interface to allow examining RAM, ROM, and external RAM.
>
> Note: Due to program memory size constraints, it may not be possible to
> support all these modes in one load image. At this point, it looks
> possible.
>
> Idle
> During idle, the PIC-E-II will monitor the terminal for a user command.
> User commands will consist of one-byte codes defined as follows:
> 1.   T Test
> 2.   K KISS
> 3.   A APRS
> 4.   U Update
> 5.   M Monitor
>
> When a command is recognized, the system will exit idle and enter the
> commanded mode. If a command is not recognized, a warning message will
> be displayed and the system will remain in idle. An example warning
> message is shown below.
>   ??? [TKAUM]
> Self Test
> Self-test mode will load a test pattern into external memory and verify
> contents. It will forward characters received on the terminal port to
> the sensor port, implementing hardware flow control to prevent data
> loss. It will forward characters received on the sensor port to the
> terminal port. It will send a test pattern to the modem port to allow
> level adjustment. Self-test mode will terminate when an escape
> character is received on the terminal port. When received, the system
> will enter the idle mode. KISS
> During Kiss mode, the PIC-E-II will read packets detected on the modem
> port. It will compute a CRC on the received packet and compare it with
> the packet FCS. If the CRCs do not match, the packet will be
> discarded.   Otherwise, it will examine the destination address for a
> match with station ID. If a match is found, the packet will be
> formatted as a KISS packet and forwarded to the host system via the
> terminal port. If the packet is not addressed for this station, the
> first entry in the path will be examined for a match with the station
> alias. If a match is detected, the packet will be reformatted and
> retransmitted.   Packets received from the host will be transmitted
> through the modem port. Kiss mode will terminate when directed by a
> return command packet from the host or when an escape character is
> received on the terminal port outside a packet.   When received, the
> system will enter the idle mode.
>
> In addition to data packets, the following command packets will be
> recognized and processed by the system.
> 1.   TX delay
> 2.   Persistence
> 3.   Slot time
> 4.   TX tail
> 5.   Full Duplex
> 6.   Set Hardware
> 7.   Return
>
> Note: Storage will be provided for buffers with a maximum size of 1024
> bytes. This will support KISS packets of a length of 1022 bytes max.
> Two transmit and two received buffers are planned. Hardware follow
> control is supported to control data flow from the host to the target.
> Support is not provided for flow control from the target to the host.
> APRS
> While in APRS mode of operation, the system will operate as either a
> mobile or fixed station. As a mobile station, it will receive position
> reports from an external NMEA-183 compliant GPS sensor at 4800 baud.
> As a fixed station, it will use a fixed position defined in system
> configuration parameters. It will format and send a position report at
> a programmable interval. This message will use the mic-e format. It
> will read packets detected on the modem port. It will compute a CRC on
> the received packet and compare it with the packet FCS. If the CRCs do
> not match, the packet will be discarded.   Otherwise, it will examine
> the destination address for a match with station ID. If a match is
> found, the packet will be logged in memory for later retrieval by the
> host system. An external beeper will briefly sound to indicate data
> reception. A front-panel lamp will blink to indicate the number or

> stored messages. A notification will be sent to the host system
> (optionally connected) in the form of a single byte code byte (0x11).
> An auto-reply message will be sent. If the packet is not addressed for
> this station, the first entry in the path will be examined for a match
> with the station alias. If a match is detected, the packet will be
> reformatted and retransmitted. When a query request is received from
> the terminal port, stored packets will be forwarded to the host system
> using the KISS protocol. A query request will consist of a single byte
> (0x11). When a query request is received, the system will send the
> oldest stored packet to the host and then delete it. If additional
> packets are stored, the packet will be followed by another ready byte
> code (0x11).   If no packets are stored, an empty byte code will be
> returned (0X13). Up to sixteen packets will be stored, each with a
> maximum length of 256 bytes.   When used as a mobile station, the
> system position received by the GPS can be saved as a configuration
> parameter. When an □S□ character is received on the serial port in
> mobile operation, the current position will be saved.   APRS mode will
> terminate when an escape character is received on the terminal port.
> When received, the system will enter the idle mode.
>
> (Future enhancement) A mechanism for a host system to send a message
> during APRS operation should be provided. This should allow the
> PIC-E-II to format a basic packet using the destination address and
> payload provided by the host system.
>
> (Future enhancements) Various sensors other than a simple GPS could be
> connected to the PIC-E-II, including integrated instruments (NMEA
> instruments that include weather data) and weather stations.
>
> (Future enhancement) Sending the position of received packets out to
> the GPS using WPL NMEA sentence.
>
> (Future enhancement) Sending received NMEA payload data out the
> terminal port for remote processing.
>
> Note: It is possible to recover stored packets after re-powering. I
> may add this feature. The FRAM chip that we selected has 8Kbytes of
> non volatile storage. 4 K is assigned to KISS packet buffers and the
> remaining 4 K is assigned to APRS packet storage. These modes are
> mutually exclusive, so some savings could be achieved by combining
> these buffers.
>
> Update
> The Update mode of operation will allow system configuration parameters
> stored in non-volatile memory to be updated. During an update, the
> host system will send these parameters to the PIC-E-II using an
> S-record format. The following configuration parameters will be stored.
> 1.   Callsign
> 2.   Position Lat
> 3.   Position Lon
> 4.   Status Text
> 5.   Group Code
> 6.   Packet Path
> 7.   Transmit Method
> 8.   Position Method
> 9.   Symbol Code
> 10.   Symbol Table ID
> 11.   Transmit Rate
> 12.   My Alias
> 13.   Mode (Mobile, Fixed)
> 14.   TX delay
> 15.   Persistence
> 16.   Slot time
> 17.   TX tail
> 18.   Full Duplex
> 19.   Default system mode (T,K,A,M)
> 20.   Beep (Mine, All, None)
> 21.   Beacon (On, Off)
>
> Update mode will terminate when an escape character is received on the
> terminal port. When received, the system will enter the idle mode.
>
> (Future enhancement) A provision to upload configuration parameters to
> a host system would be useful.
> Monitor
> The monitor mode will allow the user to examine internal and external
> memory. The system will accept monitor commands from the terminal
> input. Commands will consist of a single command character followed by
> a hex number terminated by □CR□. Commands recognized are listed below.

>
> 1.   Display RAM □D□
> 2.   Display EEPROM □E□
> 3.   Display External Memory □X□
>
> If a command is not recognized, a question mark will be displayed.
> Monitor mode will terminate when an escape character is received on the
> terminal port. When received, the system will enter the idle mode.
> Loader
> Program mode will be entered when the system powers up with a program
> jumper in place. This code will reside on the last page of program
> memory, space normally assigned to the ICD. It will be built as a
> separate image. When entered, the system will display a startup banner
> including the version number of the loader program. It will accept a
> program file from the system terminal port using an S-record format.
> It will load this image into program space, protecting its own address
> space and address zero from being overwritten. If space permits, it
> will also program EEPROM with
> non-volatile parameters. Program mode will terminate when an escape
> character is received on the terminal port. When received, the system
> will boot the loaded image.
>
> NB: Kits will be shipped with the loader image burned into flash.
> Support Software
> The following support software will be required for system operation.
> APRS Host Software
> This software will allow a host computer system to connect to the
> PIC-E-II to allow examining stored messages and to set configuration
> parameters. Received packets should be parsed and displayed in an
> intelligent fashion. A clear display should be provided to set
> configuration parameters. This software will be described in its own
> functional spec. Suggested host platforms include Windows, CE, Palm,
> and Unix variants.
> Host Loader
> This software will allow a user to re-flash the program image in the
> PIC-E-II. A simple terminal program such as Hyperterminal or tip might
> be sufficient to support this feature.   Some sensible method to set
> configuration parameters is needed however. If this APRS host software
> is not provided in the initial release, the loader will need to support
> this. Gary□s application needs a method to load configuration
> parameters too, and his software doesn□t use the APRS host software.
> Some coordination is needed here.
>
>
> ---
> You are currently subscribed to picsig as: jamesp@intertex.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] Re: FW: PIC-E-II development help request

From: "Rich Carter" <ke1ev@arrl.net>
Date: Mon, 4 Mar 2002 17:19:14 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66535-2002.03.04-16.48.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The restrictions are no more restrictive than what GNU requires. I don't
want people to make money off my hard work.

Regards
Rich

-----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Curt, WE7U
Sent: Monday, March 04, 2002 4:32 PM
To: TAPR PIC Development Special Interest Group
Cc: Curt Mills, WE7U
Subject: [picsig] Re: FW: PIC-E-II development help request

On Mon, 4 Mar 2002, Rich Carter wrote:

> A small group of us are working on a next generation PIC-E. The new board

> will both send and receive packets.

I'm all for that. We need an open-source TNC.

> We plan to support integration of the PIC-E-II with existing tools such as
> APRS-Dos, APRS-CE, APRS-SA, etc. Developers of those applications are
> welcome to contact me with comments and suggestions.

I'm one of the Xastir developers. What sort of special support might it
need in the application? I don't have time right now to look through your
functional spec, but I'll try to do so.

> Open source with restrictions

Depending on the restrictions, you might not be able to call it Open-Source
at all. Be careful with the term. It means very specific things.

Curt, WE7U   archer@eskimo.com
Arlington, WA, USA   http://www.eskimo.com/~archer
"Lotto: A tax on people who are bad at math." -- unknown
"Windows: Microsoft's tax on computer illiterates." -- WE7U

You are currently subscribed to picsig as: KE1EV@ARRL.net
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---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] Re: FW: PIC-E-II development help request

From: "Curt, WE7U" <archer@eskimo.com>
Date: Mon, 4 Mar 2002 14:30:26 -0800 (PST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66542-2002.03.04-17.02.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Mon, 4 Mar 2002, Rich Carter wrote:

> The restrictions are no more restrictive than what GNU requires. I don't
> want people to make money off my hard work.

Nobody should have any problem with that! I was just referring to
the definition of "open-source". You can't call it open-source unless
it meets these requirements:

        http://www.opensource.org/docs/definition_plain.html

I suspect that requirement #1 is the main one you'll have a problem
with.

Good luck to you, whatever type of license you finally release it
under. Let me know if/how I can help with integration of this unit
with Xastir.

Curt, WE7U   archer@eskimo.com
Arlington, WA, USA   http://www.eskimo.com/~archer
"Lotto: A tax on people who are bad at math." -- unknown
"Windows: Microsoft's tax on computer illiterates." -- WE7U

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6. [picsig] Re: picsig digest: March 04, 2002

From: "J.P. Rouland" <jprouland@attbi.com>
Date: Mon, 04 Mar 2002 21:54:31 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66633-2002.03.05-00.34.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have been, for a while, looking for an "APRS receiver" (
The "transmit" part is well done by many MIC-E type
gadgets), able to receive position packets from APRS
stations, and reformat them for sending to the few GPS who
can display such positions on their OWN screen (Garmin
GPS-3 and 3+, among others). Why? Try to run a laptop, or
similar "screens" on the handlebars of a motorcycle! The
GPS's own screen is the only possible solution..
Saw your group is considering this as a possible
enhancement. May be happy to help, but resources (time) are
limited. Just built Jim Hansen's KISS unit, as a starting
point, but didn't have time to "customize" it yet..
J.P. Rouland NQ6T Fremont, CA <jprouland@attbi.com>

TAPR PIC Development Special Interest Group digest wrote:
>
> TAPR PIC Development Special Interest Group Digest for Monday, March 04, 2002.
>
> 1. FW: PIC-E-II development help request
> 2. Re: FW: PIC-E-II development help request
> 3. Re: FW: PIC-E-II development help request
> 4. Re: FW: PIC-E-II development help request
> 5. Re: FW: PIC-E-II development help request
>
> --
>
> Subject: FW: PIC-E-II development help request
> From: "Rich Carter" <ke1ev@arrl.net>
> Date: Mon, 4 Mar 2002 14:40:31 -0500
> X-Message-Number: 1
>
> A small group of us are working on a next generation PIC-E.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
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7. [picsig] Re: FW: PIC-E-II development help request

From: Jeff King <jeff@aerodata.net>
Date: Mon, 4 Mar 2002 17:46:16 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66652-2002.03.05-02.00.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Mon, 4 Mar 2002 13:31:47 -0800 (PST), Curt, WE7U wrote:
>On Mon, 4 Mar 2002, Rich Carter wrote:

>> Open source with restrictions
>
>Depending on the restrictions, you might not be able to call it
Open-
>Source
>at all.

I think real open source is lower case, in that it means just that,
open source. You can do whatever you want with it. I think the
closest thing to open source would be the Berkley license, which of
course is now Open Source.

-Jeff

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8. [picsig] Re: FW: PIC-E-II development help request

From: "Andrew Rich" <andrew.rich@bigpond.com>
Date: Tue, 5 Mar 2002 19:10:35 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Message-ID: <LYR6890-66661-2002.03.05-03.42.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I can program in visual basic if that is any help for windows apps

Andrew VK4TEC

www.users.bigpond.com/andrew.rich/vk4tec.htm

-----Original Message-----
From: bounce-picsig-28143@lists.tapr.org
[mailto:bounce-picsig-28143@lists.tapr.org]On Behalf Of Jeff King
Sent: Tuesday, 5 March 2002 8:46 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: FW: PIC-E-II development help request

On Mon, 4 Mar 2002 13:31:47 -0800 (PST), Curt, WE7U wrote:
>On Mon, 4 Mar 2002, Rich Carter wrote:

>> Open source with restrictions
>
>Depending on the restrictions, you might not be able to call it
Open-
>Source
>at all.

I think real open source is lower case, in that it means just that,
open source. You can do whatever you want with it. I think the
closest thing to open source would be the Berkley license, which of
course is now Open Source.

-Jeff

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9. [picsig] Viterbi decoder ?

From: "Marcelo" <mark@cpovo.net>
Date: Tue, 5 Mar 2002 10:07:00 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66684-2002.03.05-07.39.49--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

I need to insert a Viterbi decoder routine (1/2, k=7) in a program.
Speed isn't a concern, as I will receive only 50 bits/minute.

Is there some PIC or ATMEL assembler code available anywhere ? I have
found nothing searching with Google.

Thanks.

Marcelo Puhl
mark@cpovo.net
http://py3ss.cjb.net

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10. [picsig] Re: FW: PIC-E-II development help request

From: "Rich Carter" <ke1ev@arrl.net>
Date: Tue, 5 Mar 2002 16:32:33 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Message-ID: <LYR6890-66805-2002.03.05-16.01.27--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>I'm one of the Xastir developers. What sort of special support might it
>need in the application? I don't have time right now to look through your
>functional spec, but I'll try to do so.

Curt

The software I'm developing has two modes of operation, KISS and stand-alone APRS. I assume that you would use the KISS mode. The PIC has very limited memory. A host tool would need to support hardware flow control to throttle data from the host to the target. I plan to provide enough memory to buffer one or two packet, max length 1022 bytes each (1024 - overhead). The serial ISR drops CTS when it receives each character. It raises it as soon as the serial buffer is read. If I run out of memory, I stop reading the serial buffer. This would leave CTS off for a while. Is there a problem supporting this?

Most host applications that I've seen assume that the GPS stream comes in through a separate host port. Many host systems only have one serial port, making this difficult. I could send GSP data to the host; interleaving it between KISS packets. I haven't been able to identify a transfer protocol that is currently defined for this kind of data. I plan to just send the raw sentences between KISS packets (configurable). Can you folks handle this? If you've heard of any protocol for this, please let me know.

If you want me to send NMEA sentences, which ones do you process?

Regards
Rich - KE1EV

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11. [picsig] Re: FW: PIC-E-II development help request

From: "Antonio Sergio Sena" <asena@bigfoot.com>
Date: Tue, 5 Mar 2002 21:54:12 -0000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66809-2002.03.05-16.26.28--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> We could use some help packaging the kit. This involves completing the
> design of an enclosure, preparing assembly instructions, and assisting with
> board layout.
> Rich Carter - KE1EV

Hi Rich

I am able to help with the PCB. I have some skills for it, so i think i could help.

Antonio Sergio Sena
CT2GPW
www.qsl.net/ct2gpw

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

12. [picsig] [picsig]: Re: FW: PIC-E-II development help request

From: James Paul <jamesp@intertex.net>
Date: Tue, 5 Mar 2002 16:04:38 +0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: asena@bigfoot.com
Message-ID: <LYR6890-66810-2002.03.05-16.36.44--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rich,

I sent you an email yesterday saying I could help with packaging the
product, and writing the assembly instructions. Although I have done
some board layout, I'm not confident enough in that area to assist.
But packaging prototype fixtures and equipment is what I do on a day
by day basis. That's my day job. I am very confident in this area.
So, if you get this email, let me know.   I don't know whether you got
the one yesterday or not.   And let me know what you want me to do.

Regards,

Jim KA9QHR

>> We could use some help packaging the kit. This involves completing
>> the design of an enclosure, preparing assembly instructions, and
>> assisting with board layout.
>> Rich Carter - KE1EV
>
>
> Hi Rich
>
> I am able to help with the PCB. I have some skills for it, so i think i
> could help.
>
> Antonio Sergio Sena
> CT2GPW
> www.qsl.net/ct2gpw
>
>
>
>
>
>
>
>
> ---
> You are currently subscribed to picsig as: jamesp@intertex.net
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13. [picsig] PIC-E-II development help request

From: James Paul <jamesp@intertex.net>
Date: Tue, 5 Mar 2002 16:07:32 +0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66812-2002.03.05-16.39.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

-------- Original Message --------
Subject: [picsig] [picsig]:   Re: FW: PIC-E-II development help request
From: James Paul <jamesp@intertex.net>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Rich,

I sent you an email yesterday saying I could help with packaging the
product, and writing the assembly instructions. Although I have done
some board layout, I'm not confident enough in that area to assist. But
packaging prototype fixtures and equipment is what I do on a day by day
basis. That's my day job. I am very confident in this area. So, if you
get this email, let me know.   I don't know whether you got the one
yesterday or not.   And let me know what you want me to do.

Regards,

Jim KA9QHR

>> We could use some help packaging the kit. This involves completing
>> the design of an enclosure, preparing assembly instructions, and
>> assisting with board layout.
>> Rich Carter - KE1EV

>
>
> Hi Rich
>
> I am able to help with the PCB. I have some skills for it, so i think i
> could help.
>
> Antonio Sergio Sena
> CT2GPW
> www.qsl.net/ct2gpw
>
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>
>
>
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>
>
> ---
> You are currently subscribed to picsig as: jamesp@intertex.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: jamesp@intertex.net
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14. [picsig] Re: FW: PIC-E-II development help request

From: "Curt, WE7U" <archer@eskimo.com>
Date: Tue, 5 Mar 2002 14:59:24 -0800 (PST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66819-2002.03.05-17.31.38--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, 5 Mar 2002, Rich Carter wrote:

> The software I'm developing has two modes of operation, KISS and stand-alone
> APRS. I assume that you would use the KISS mode.

That's the best protocol. Leaves nothing to chance. Xastir handles
either kernel KISS drivers or serial-port TNC's in normal mode.
KISS mode preferred.

Xastir runs on many different platforms, but I think the only one
that currently supports kernel-AX25 drivers is Linux. Someone
correct me if Mac OS X or FreeBSD support it as well. I know Solaris
doesn't.

> The serial
> ISR drops CTS when it receives each character. It raises it as soon as the
> serial buffer is read. If I run out of memory, I stop reading the serial
> buffer. This would leave CTS off for a while. Is there a problem
> supporting this?

Nope! That sounds like standard hardware handshaking. I think the
KISS drivers in Linux handle hardware handshaking properly. If the
user solders up a 3-wire cable for this though, all bets are off.

> Most host applications that I've seen assume that the GPS stream comes in
> through a separate host port. Many host systems only have one serial port,
> making this difficult. I could send GSP data to the host; interleaving it
> between KISS packets. I haven't been able to identify a transfer protocol
> that is currently defined for this kind of data. I plan to just send the
> raw sentences between KISS packets (configurable). Can you folks handle
> this? If you've heard of any protocol for this, please let me know.

We handle Ctrl-E protocol (just getting implemented now), hardware
serial port (HSP) mode, and of course having GPS and TNC on
different ports. To handle NMEA _or_ KISS packets on the same port
might entail tweaking the Linux kernel or modules that support KISS

mode. I would think the kernel would toss the packet away if it
weren't in a KISS envelope.

It'd be nicer if the NMEA data were enclosed in a KISS packet as well,
with perhaps a different channel identifier. Xastir could then split
this off as another device in the code. I'm not sure if the Linux
KISS drivers could directly handle this, but it's worth looking at.

Might you support Ctrl-E to fetch the strings like some of the
commercial TNC's use? That'd make this new TNC usable by more
users. Another idea would be to add HSP hardware onto the board
so that a handshake could select which device you want data from.

How about this: http://www.tapr.org/tapr/html/Fcnc10.html
"Multi-Drop KISS Operation by Karl Medcalf, WK5M
 Abstract: John Wiseman (G8PBQ) has developed a multi-drop KISS
 protocol, allowing several TNCs to be connected to a single serial
 I/O port while operating KISS mode."

If the TNC appeared to be two, one of which was sending packets
and the other NMEA strings, using multi-drop KISS protocol, then
there are drivers for Linux to handle this.

Also see this: http://people.qualcomm.com/karn/papers/kiss.html
and search for "multi-port". It says that a KISS TNC can have up
to 16 ports.

> If you want me to send NMEA sentences, which ones do you process?

Xastir handles GPRMC and GPGGA. It currently ignores the rest.

Curt, WE7U   archer@eskimo.com
Arlington, WA, USA   http://www.eskimo.com/~archer
"Lotto: A tax on people who are bad at math." -- unknown
"Windows: Microsoft's tax on computer illiterates." -- WE7U

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15. [picsig] Re: FW: PIC-E-II development help request

From: "Curt, WE7U" <archer@eskimo.com>
Date: Tue, 5 Mar 2002 15:51:43 -0800 (PST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66822-2002.03.05-18.23.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, 5 Mar 2002, Curt, WE7U wrote:

> On Tue, 5 Mar 2002, Rich Carter wrote:
>
> > The serial
> > ISR drops CTS when it receives each character. It raises it as soon as the
> > serial buffer is read. If I run out of memory, I stop reading the serial
> > buffer. This would leave CTS off for a while. Is there a problem
> > supporting this?
>
> Nope! That sounds like standard hardware handshaking. I think the
> KISS drivers in Linux handle hardware handshaking properly. If the
> user solders up a 3-wire cable for this though, all bets are off.

BZZZZZT! Thank you for playing Curt!

The KISS spec plainly says in section 2, Asynchronous Frame Format:
"No CRC or checksum is provided. In addition, no RS-232C handshaking
signals are employed."

I guess that answers the question. We're not supposed to do hardware
handshaking with KISS. Packets that get dropped, get dropped. They're
supposed to be handled by the higher-level protocols. This is to keep
the KISS protocol simple.

Three-wire cables are allowed, and evidently encouraged.

So. How to handle a very small buffer size? John Hansen did it with
his PIC TNC by adding another chip, a 32kx8 static RAM.

```
-----------------------------------------------------------------
Curt, WE7U                      archer@eskimo.com
Arlington, WA, USA              http://www.eskimo.com/~archer
"Lotto:    A tax on people who are bad at math." -- unknown
"Windows:  Microsoft's tax on computer illiterates." -- WE7U


---
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```

16. [picsig] Re: FW: PIC-E-II development help request

From: John Hansen <hansen@fredonia.edu>
Date: Tue, 05 Mar 2002 19:42:18 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66857-2002.03.05-19.21.15--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ah, nothing is so simple in the land of KISS. Indeed, the KISS spec says
no handshaking. However, some programs expect and require it. For
example, I found that my PIC KISS TNC would never transmit when used with
WinTNC. It turns out that WinTNC won't transmit unless it sees a hardware
handshake even in KISS mode. I resolved this by wiring pins 7 and 8
together on the DB-9 serial connector on the PIC TNC. The bottom line is
that you can't rely on hardware handshaking because the KISS spec says
no. But you have to provide hardware handshaking or some KISS programs
won't work. One possibility is to consider the 6-pack specification
instead, which does support flow control. The problem there is that much
of the software that you want to use probably won't support it.

John W2FS

At 03:51 PM 3/5/02 -0800, you wrote:
>On Tue, 5 Mar 2002, Curt, WE7U wrote:
>
> > On Tue, 5 Mar 2002, Rich Carter wrote:
> >
> > > The serial
> > > ISR drops CTS when it receives each character. It raises it as soon
> as the
> > > serial buffer is read. If I run out of memory, I stop reading the serial
> > > buffer. This would leave CTS off for a while. Is there a problem
> > > supporting this?
> >
> > Nope! That sounds like standard hardware handshaking. I think the
> > KISS drivers in Linux handle hardware handshaking properly. If the
> > user solders up a 3-wire cable for this though, all bets are off.
>
>BZZZZZT! Thank you for playing Curt!
>
>The KISS spec plainly says in section 2, Asynchronous Frame Format:
>"No CRC or checksum is provided. In addition, no RS-232C handshaking
>signals are employed."
>
>I guess that answers the question. We're not supposed to do hardware
>handshaking with KISS. Packets that get dropped, get dropped. They're
>supposed to be handled by the higher-level protocols. This is to keep
>the KISS protocol simple.
>
>Three-wire cables are allowed, and evidently encouraged.
>
>So. How to handle a very small buffer size? John Hansen did it with
>his PIC TNC by adding another chip, a 32kx8 static RAM.
>
>---
>Curt, WE7U   archer@eskimo.com
>Arlington, WA, USA   http://www.eskimo.com/~archer
>"Lotto: A tax on people who are bad at math." -- unknown
>"Windows: Microsoft's tax on computer illiterates." -- WE7U
>
>
>---
>You are currently subscribed to picsig as: hansen@fredonia.edu
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---

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17. [picsig] Re: FW: PIC-E-II development help request

From: John Morley <jmorley@endeavour-usa.com>
Date: Tue, 05 Mar 2002 23:39:41 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66884-2002.03.05-23.10.03--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rich,

If you're still looking for someone to do your PIC-E-II PCB, I'd be happy
to do it. I do a lot
of PCB layout at work, and I have all the tools. I can even recommend some
prototype and production
board shops that offer great quality and decent prices. I'll be away from
3/7 to 3/14, but on my return
I'd be happy to jump in with both feet!

Let me know

John KA1JMF

At 04:32 PM 3/5/2002 -0500, you wrote:
> >I'm one of the Xastir developers. What sort of special support might it
> >need in the application? I don't have time right now to look through your
> >functional spec, but I'll try to do so.
>
>Curt
>
>The software I'm developing has two modes of operation, KISS and stand-alone
>APRS. I assume that you would use the KISS mode. The PIC has very limited
>memory. A host tool would need to support hardware flow control to throttle
>data from the host to the target. I plan to provide enough memory to buffer
>one or two packet, max length 1022 bytes each (1024 - overhead). The serial
>ISR drops CTS when it receives each character. It raises it as soon as the
>serial buffer is read. If I run out of memory, I stop reading the serial
>buffer. This would leave CTS off for a while. Is there a problem
>supporting this?
>
>Most host applications that I've seen assume that the GPS stream comes in
>through a separate host port. Many host systems only have one serial port,
>making this difficult. I could send GSP data to the host; interleaving it
>between KISS packets. I haven't been able to identify a transfer protocol
>that is currently defined for this kind of data. I plan to just send the
>raw sentences between KISS packets (configurable). Can you folks handle
>this? If you've heard of any protocol for this, please let me know.
>
>If you want me to send NMEA sentences, which ones do you process?
>
>Regards
>Rich - KE1EV
>
>
>---
>You are currently subscribed to picsig as: jmorley@endeavour-usa.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
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18. [picsig] Re: FW: PIC-E-II development help request

From: Jeff King <jeff@aerodata.net>
Date: Tue, 5 Mar 2002 19:03:12 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66897-2002.03.06-00.06.56--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, 5 Mar 2002 15:51:43 -0800 (PST), Curt, WE7U wrote:

>I guess that answers the question. We're not supposed to do
hardware
>handshaking with KISS.

Yeap, per the ~1986 Phil Karn paper. And per most U.S. based programs
(with the notable exception of some of the Linux stuff). So, you need
to support this version of KISS.

There are however more "modern" versions of KISS that address some of
the short comings, SMACK and 6-PAK are two types you might want to
research. They have there advantages and seem somewhat well support
in Europe.

>Packets that get dropped, get dropped.
>They're
>supposed to be handled by the higher-level protocols. This is to
>keep
>the KISS protocol simple.

I wouldn't go that far, at least in they eyes of its maker, KISS was
just a intrium thing. At the time it came out, we where transitioning
to SCC based cards, such as the DRSI and others. The idea being you
have a closer coupling between the radio and computer, which the
original KISS did not allow. 6-Pack allows the computer to poll the
TNC to see if the frame actually has been sent, which is very useful
on a busy channel, and this allows for closer coupling between the
radio and computer.

Understand your talking the reality of the situation but KISS was
just supposed to be a short term kludge, at least in respect to the
problems you have pointed out. In other words, advancements would be
welcomed and encouraged.

>
>So. How to handle a very small buffer size? John Hansen did it
with
>his PIC TNC by adding another chip, a 32kx8 static RAM.
>
>--
>Curt, WE7U   archer@eskimo.com
>Arlington, WA, USA   http://www.eskimo.com/~archer
>"Lotto: A tax on people who are bad at math." -- unknown
>"Windows: Microsoft's tax on computer illiterates." -- WE7U
>
>
>---
>You are currently subscribed to picsig as: jeff@aerodata.net
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>6948X@lists.tapr.org
>

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19. [picsig] Re: FW: PIC-E-II development help request

From: "Marcelo" <mark@cpovo.net>
Date: Wed, 6 Mar 2002 09:37:38 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-66925-2002.03.06-07.11.47--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 5 Mar 2002 at 19:03, Jeff King wrote:

>
> Understand your talking the reality of the situation but KISS was
> just supposed to be a short term kludge, at least in respect to the
> problems you have pointed out. In other words, advancements would be
> welcomed and encouraged.
>

Just remember the YAM modem, using CTS flow control without any
buffering. Some kind of SPI protocol, just clock + data.

Each time the modem changes CTS state, the application software
have to send another byte to the modem.

YAM uses a CD signal connected to the DCD pin, too.

Regards.

Marcelo Puhl
mark@cpovo.net
http://py3ss.cjb.net

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20. [picsig] Hansen PIC TNC info?

From: "Tom Alldread, VA7TA" <tma@mail.island.net>
Date: Sun, 10 Mar 2002 10:02:59 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-67645-2002.03.10-12.36.47--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Greetings All:

I noticed reference here to John Hansen's PIC TNC. I wonder if anyone can
point me towards possible web addresses with detailed information on the
design?

Thanks in advance!

73 & Enjoy!
Tom, VA7TA

21. [picsig] Re: Hansen PIC TNC info?

From: "Byon Garrabrant" <byon@byon.com>
Date: Sun, 10 Mar 2002 10:37:33 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-67650-2002.03.10-13.09.48--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 10 Mar 2002, at 10:02, Tom Alldread, VA7TA <picsig@lists.tapr.org> wrote:

> Greetings All:
>
> I noticed reference here to John Hansen's PIC TNC. I wonder if anyone
> can point me towards possible web addresses with detailed information
> on the design?
>
> Thanks in advance!
>

http://john.hansen.net/

_____
 Byon Garrabrant   N6BG   byon@byon.com

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

22. [picsig] Re: Hansen PIC TNC info?

From: David Beach <dbeach@blvl.igs.net>
Date: Sun, 10 Mar 2002 15:21:02 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-67656-2002.03.10-14.53.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Although not online, if you can dig up a November 2000 QST, John wrote an
article describing it. (At least I am pretty sure that's the date....) The
code is not described in detail in the article but the C source is available
on the ARRL website in the 'files' area.
--
David Beach
VE3STI

> From: "Tom Alldread, VA7TA" <tma@mail.island.net>
> Reply-To: "TAPR PIC Development Special Interest Group"
> <picsig@lists.tapr.org>
> Date: Sun, 10 Mar 2002 10:02:59 -0800

> To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
> Subject: [picsig] Hansen PIC TNC info?
>
> I noticed reference here to John Hansen's PIC TNC. I wonder if anyone can
> point me towards possible web addresses with detailed information on the
> design?

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April 2002

Original source file: picsig.0204
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0204

1. [picsig] [OT} CRC calculation

From: "Marcelo" <mark@cpovo.net>
Date: Sun, 7 Apr 2002 10:45:25 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-72730-2002.04.07-09.18.32--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have found these three CRC-16 calculation routines, but all off them give
me different results. I don't know why...

And which one is the correct one ?

Thanks.

```
--------------------

crc16(char c)   /*CCITT 16bit algorithm (X^16 + X^12 + X^5 + 1) */
{
        crc  = (unsigned char)(crc >> 8) | (crc << 8);
        crc ^= c;
        crc ^= (unsigned char)(crc & 0xff) >> 4;
        crc ^= (crc << 8) << 4;
        crc ^= ((crc & 0xff) << 4) << 1;
}

----------------------

/*
  *                                       16   12   5
  * this is the CCITT CRC 16 polynomial X  + X  + X  + 1.
  * This is 0x1021 when x is 2, but the way the algorithm works
  * we use 0x8408 (the reverse of the bit pattern).  The high
  * bit is always assumed to be set, thus we only use 16 bits to
  * represent the 17 bit value.
 */

#define POLY 0x8408   /* 1021H bit reversed */

crc16a(char c)
{
        int i;
        for (i=0; i < 8; i++, c >>= 1){
                if ((crc & 1) ^ (c & 1)){
                        crc = (crc >> 1) ^ POLY;
                }
                else  crc >>= 1;
        }
}

------------------

/*
 * CRC computation logic
 *
 * The logic for this method of calculating the CRC 16 bit polynomial is
 * taken from an article by David Schwaderer in the April 1985 issue of
 * PC Tech Journal.
 */

static short crctab[] =  /* CRC lookup table */
{
 0x0000, 0xC0C1, 0xC181, 0x0140, 0xC301, 0x03C0, 0x0280, 0xC241,
 0xC601, 0x06C0, 0x0780, 0xC741, 0x0500, 0xC5C1, 0xC481, 0x0440,
 0xCC01, 0x0CC0, 0x0D80, 0xCD41, 0x0F00, 0xCFC1, 0xCE81, 0x0E40,
 0x0A00, 0xCAC1, 0xCB81, 0x0B40, 0xC901, 0x09C0, 0x0880, 0xC841,
 0xD801, 0x18C0, 0x1980, 0xD941, 0x1B00, 0xDBC1, 0xDA81, 0x1A40,
 0x1E00, 0xDEC1, 0xDF81, 0x1F40, 0xDD01, 0x1DC0, 0x1C80, 0xDC41,
 0x1400, 0xD4C1, 0xD581, 0x1540, 0xD701, 0x17C0, 0x1680, 0xD641,
 0xD201, 0x12C0, 0x1380, 0xD341, 0x1100, 0xD1C1, 0xD081, 0x1040,
 0xF001, 0x30C0, 0x3180, 0xF141, 0x3300, 0xF3C1, 0xF281, 0x3240,
 0x3600, 0xF6C1, 0xF781, 0x3740, 0xF501, 0x35C0, 0x3480, 0xF441,
 0x3C00, 0xFCC1, 0xFD81, 0x3D40, 0xFF01, 0x3FC0, 0x3E80, 0xFE41,
 0xFA01, 0x3AC0, 0x3B80, 0xFB41, 0x3900, 0xF9C1, 0xF881, 0x3840,
```

```
 0x2800, 0xE8C1, 0xE981, 0x2940, 0xEB01, 0x2BC0, 0x2A80, 0xEA41,
 0xEE01, 0x2EC0, 0x2F80, 0xEF41, 0x2D00, 0xEDC1, 0xEC81, 0x2C40,
 0xE401, 0x24C0, 0x2580, 0xE541, 0x2700, 0xE7C1, 0xE681, 0x2640,
 0x2200, 0xE2C1, 0xE381, 0x2340, 0xE101, 0x21C0, 0x2080, 0xE041,
 0xA001, 0x60C0, 0x6180, 0xA141, 0x6300, 0xA3C1, 0xA281, 0x6240,
 0x6600, 0xA6C1, 0xA781, 0x6740, 0xA501, 0x65C0, 0x6480, 0xA441,
 0x6C00, 0xACC1, 0xAD81, 0x6D40, 0xAF01, 0x6FC0, 0x6E80, 0xAE41,
 0xAA01, 0x6AC0, 0x6B80, 0xAB41, 0x6900, 0xA9C1, 0xA881, 0x6840,
 0x7800, 0xB8C1, 0xB981, 0x7940, 0xBB01, 0x7BC0, 0x7A80, 0xBA41,
 0xBE01, 0x7EC0, 0x7F80, 0xBF41, 0x7D00, 0xBDC1, 0xBC81, 0x7C40,
 0xB401, 0x74C0, 0x7580, 0xB541, 0x7700, 0xB7C1, 0xB681, 0x7640,
 0x7200, 0xB2C1, 0xB381, 0x7340, 0xB101, 0x71C0, 0x7080, 0xB041,
 0x5000, 0x90C1, 0x9181, 0x5140, 0x9301, 0x53C0, 0x5280, 0x9241,
 0x9601, 0x56C0, 0x5780, 0x9741, 0x5500, 0x95C1, 0x9481, 0x5440,
 0x9C01, 0x5CC0, 0x5D80, 0x9D41, 0x5F00, 0x9FC1, 0x9E81, 0x5E40,
 0x5A00, 0x9AC1, 0x9B81, 0x5B40, 0x9901, 0x59C0, 0x5880, 0x9841,
 0x8801, 0x48C0, 0x4980, 0x8941, 0x4B00, 0x8BC1, 0x8A81, 0x4A40,
 0x4E00, 0x8EC1, 0x8F81, 0x4F40, 0x8D01, 0x4DC0, 0x4C80, 0x8C41,
 0x4400, 0x84C1, 0x8581, 0x4540, 0x8701, 0x47C0, 0x4680, 0x8641,
 0x8201, 0x42C0, 0x4380, 0x8341, 0x4100, 0x81C1, 0x8081, 0x4040
};

int crc16b(char c)
{
        crc = ((crc >> 8) & 0xff) ^ crctab[(crc ^ c) & 0xff];
}
```

Marcelo Puhl
Mensa Brasil member
http://www.mensa.com.br

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] Re: [OT} CRC calculation

From: "Byon Garrabrant" <byon@byon.com>
Date: Sun, 7 Apr 2002 12:26:08 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-72774-2002.04.07-15.00.01--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 7 Apr 2002, at 10:45, Marcelo <picsig@lists.tapr.org> wrote:

> I have found these three CRC-16 calculation routines, but all off them
> give me different results. I don't know why...
>
> And which one is the correct one ?
>
> Thanks.

The second one is the correct one, and is the easiest to usee on a
PIC.

Fro more info, look at the PIC source for the PIC-E at
ftp://ftp.tapr.org/picsig/software/ . Specifically GPS-E-2G, pice095,
and pktin01.

Also, check out dcc.zip and dcc2.zip at
ftp://ftp.tapr.org/pub/wa0ptv/

Byon

_____
 Byon Garrabrant   N6BG   byon@byon.com

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] [OT][FWD] CRC-16 calculations

From: "Marcelo" <mark@cpovo.net>
Date: Sun, 7 Apr 2002 22:21:17 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-72873-2002.04.07-20.54.42--lyris.picsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

------- Forwarded message follows -------

One issue is that as well as the algorithm, there is also the starting value
that comes in to it (often zero or -1 (all ones)). Also, the CRC is
sometimes stored complemented at the end of the data resulting in a known
constant non-zero value at the end (for CRC-CCITT it is $1D0F).

Most likely they are all correct, however you need to find the one that
matches the application you are using.

The lookup table is the best solution in general.

You might want to look at the compression FAQ question on CRC:

http://www.faqs.org/faqs/compression-faq/part1/section-26.html

This page also has a lot of very good CRC info:

http://www.ciphersbyritter.com/ARTS/CRCMYST.HTM

That last page is well worth a look.

------- End of forwarded message -------

73, Marcelo - PY3SS
http://py3ss.cjb.net

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4. [picsig] 2002 Digital BASH at Dayton Hamvention

From: "John R. Ackermann" <jra@febo.com>
Date: Tue, 09 Apr 2002 19:33:35 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-73145-2002.04.09-19.07.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Going to the Dayton Hamvention? Then plan to attend the annual Digital*BASH
sponsored by TAPR and the Miami Valley FM Association to be held on Friday,
May 17, 2002!

For reservations, please contact the TAPR office as described below.

What?
        An event for the digitally-inclined ham, featuring:
        * Buffet dinner (Prime Rib, Chicken, and Pasta)
        * Keynote Address (Speaker to be named)
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, May 17, 2002
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner

Where?
        Kohler's Banquet Center, 4548 Presidential Way, Kettering
        (39 40.75N, 84 08.43W), about 6 miles SE of downtown Dayton --
        just off of East David Road. Detailed directions and maps are available
        on the TAPR web site (http://www.tapr.org/tapr/html/Fdayton.maps.html)
        or at the TAPR booth.

How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention. The cost
        is $25.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        particpate in the meetings, although only those purchasing a dinner
        can eat.

To register, contact:
PACK*BASH
c/o TAPR
8987-309 E. Tanque Verde Road #337
Tucson, AZ 85749-9399

Phone: 972-671-TAPR (8277)
Fax: 972-671-8716
Internet: tapr@tapr.org

Visa/Mastercard Accepted

Who?
PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet Radio, the national leader in digital communication -- and the Miami Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to http://www.tapr.org/tapr/html/dayton.html#packetbash, or send email to tapr@tapr.org.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] Digital BASH Update

From: John Ackermann N8UR <jra@febo.com>
Date: Wed, 24 Apr 2002 11:21:33 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-76158-2002.04.24-10.59.30--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We're very happy to announce that Bdale Garbe, KB0G, will be the keynote speaker at the TAPR/MVFMA Digital BASH on Friday evening at Hamvention.

Bdale is one of the long-time "good guys" in the digital radio and amateur satellite worlds. He was in the middle of the early work on KA9Q's "NET" and "NOS" programs, pioneered megabit-rate packet radio, and in the satellite world was heavily involved in the RUDAK and AO-40 GPS experiments. Back in the Old Days, he was a board member and Vice President of TAPR, and remains one of TAPR's best friends. On a different front, Bdale was just elected as Debian Project Leader, so he now oversees one of the major Linux distributions -- and the one that is by far the most ham-friendly. Bdale works in the Linux development group at HP, and in his spare (?) time does VHF/UHF/microwave contesting and roaming.

Bdale's talk will blend all of these interests into an entertaining and informative presentation titled "From Bits in the Basement to Debian -- and Back Again".

You can find more information about the Digital BASH and TAPR's other Hamvention activities at http://www.tapr.org/tapr/dayton/.

See you there!

73,
John

John Ackermann N8UR jra@febo.com http://www.febo.com
President, TAPR n8ur@tapr.org http://www.tapr.org

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May 2002

Original source file: picsig.0205
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0205

1. [picsig] Spring _Packet_Status_Register_ Available Online

From: "John R. Ackermann" <jra@febo.com>
Date: Thu, 02 May 2002 20:26:04 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-77559-2002.05.02-20.03.01--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As the subject says... the new issue of TAPR's journal, the
_Packet_Status_Register_, is now available online. You can go to
http://www.tapr.org/tapr/html/Fpsr.html, or obtain it via ftp from
ftp://ftp.tapr.org/psr/Spring_83_2002.pdf. You'll need Adobe Acrobat or
other PDF file reader to view the document.

Stan Horzepa, WA1LOU, has taken the reins as the PSR's editor, and I'd like
to thank him for his great work on this issue. Please send comments,
suggestions, or -- best of all -- articles to Stan at psr@tapr.org.

73,
John N8UR

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] Message to dk7xe

From: "Peter Bennett" <runtime@intelnet.net.gt>
Date: Sat, 4 May 2002 15:57:34 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-77827-2002.05.04-17.29.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Gerald,

I've been trying to send you an email to dk7xe@qsl.net but every time I've
got rejected. We really like to test your TinyTrack PCB, would you please
send us the component list and the interfacing instructions.

Thank you in advance
Peter Bennett

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3. [picsig] I did _not_ propagate this one!

From: "Curt Mills, WE7U" <hacker@tc.fluke.com>
Date: Tue, 21 May 2002 13:29:42 -0700 (PDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-80252-2002.05.21-16.05.16--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I just received a reject message from a spam filter somewhere out
there. E-mail with a virus attached was received at that machine,
and apparently came from my work address.

Since I can't get infected here through e-mail (I run Linux, not
Windows!), I'm absolutely sure that this address is not sending out
virus e-mail. My e-mail program does absolutely nothing with
attachments, scripts, etc.

It's likely that someone on a mailing list I subscribe to got
infected with the W32/KLEZ virus (but not from me!). This virus
finds addresses in the mailboxes and forges e-mail as if it came
from those addresses.

Please run your virus scanners again people! Be wary of
attachments, no matter who they came from.

I apologize if you get multiple copies of this because you're on
more than one mailing list that I also subscribe to. I just want to
keep my "good" name clean.

Curt Mills, WE7U hacker.NO_*SPAM@tc.fluke.com
Senior Methods Engineer/SysAdmin
"Lotto: A tax on people who are bad at math." -- unknown
"Windows: Microsoft's tax on computer illiterates." -- WE7U

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] What's the "new" 'F84?

From: James Jefferson <jjeffers@deskmedia.com>
Date: Sat, 25 May 2002 14:04:17 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-81153-2002.05.25-14.36.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi everyone - Does Microchip have any new flash, 18 pin, PIC processors?
Microchip's site is hard to navigate for me because I'm on a modem.

Thanks,

-James Jefferson KB0THN

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] Re: What's the "new" 'F84?

From: Andy Meng <n8mx@yahoo.com>
Date: Sat, 25 May 2002 12:09:46 -0700 (PDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-81155-2002.05.25-14.45.28--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes... the 16F627 and 16F628 are the new ones. Better
in many ways, USART, PWM, more timers, internal osc,
cost less, etc. They are really nice to work with...
in fact, I'm using some right now!

73,
Andy N8MX
www.qsl.net/n8mx

--- James Jefferson <jjeffers@deskmedia.com> wrote:
> Hi everyone - Does Microchip have any new flash, 18
> pin, PIC processors?
> Microchip's site is hard to navigate for me because
> I'm on a modem.
>
> Thanks,
>
> -James Jefferson KB0THN
>
> ---
> You are currently subscribed to picsig as:
> n8mx@yahoo.com
> To unsubscribe send a blank email to
> leave-picsig-6890E@lists.tapr.org
>

_____
Do You Yahoo!?
Yahoo! - Official partner of 2002 FIFA World Cup
http://fifaworldcup.yahoo.com

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6. [picsig] Re: What's the "new" 'F84?

From: "Ken Isom" <isomk@airmail.net>
Date: Sat, 25 May 2002 16:29:49 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-81170-2002.05.25-17.12.47--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Will my TAPR PIC-E program these new pics?

Thanks
Ken

-----Original Message-----
From: bounce-picsig-19021@lists.tapr.org
[mailto:bounce-picsig-19021@lists.tapr.org]On Behalf Of Andy Meng
Sent: Saturday, May 25, 2002 2:10 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: What's the "new" 'F84?

Yes... the 16F627 and 16F628 are the new ones. Better
in many ways, USART, PWM, more timers, internal osc,
cost less, etc. They are really nice to work with...
in fact, I'm using some right now!

73,
Andy N8MX
www.qsl.net/n8mx

--- James Jefferson <jjeffers@deskmedia.com> wrote:
> Hi everyone - Does Microchip have any new flash, 18
> pin, PIC processors?
> Microchip's site is hard to navigate for me because
> I'm on a modem.
>
> Thanks,
>
> -James Jefferson KB0THN
>
> ---
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>

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Do You Yahoo!?
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http://fifaworldcup.yahoo.com

You are currently subscribed to picsig as: kd5aia@arrl.net
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] Re: What's the "new" 'F84?

From: "David Beach" <dbeach@blvl.igs.net>
Date: Sat, 25 May 2002 18:12:59 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-81682-2002.05.28-16.38.49--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The new 'F627 and 'F628 are also cheaper, in addition to the new features -
another bit of good news.

I don't know how long the 'life cycle' of the 'F84 will be but, personally,
I am not going to be doing any new development work the older chip.
(Actually, I look longingly at the 'F87x series and Microchip's ICD - these
chips, too, are pretty cheap and the ICD looks nifty but for the moment...)

My programmer will do both - some of the freebie programmers only do the
'F84 which might influence you if you have one of those.

David Beach
VE3STI

> -----Original Message-----
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Re: What's the "new" 'F84?
>

>
> Yes... the 16F627 and 16F628 are the new ones. Better
> in many ways, USART, PWM, more timers, internal osc,
> cost less, etc. They are really nice to work with...
> in fact, I'm using some right now!
>
> 73,
> Andy N8MX
> www.qsl.net/n8mx
>
> --- James Jefferson <jjeffers@deskmedia.com> wrote:
> > Hi everyone - Does Microchip have any new flash, 18
> > pin, PIC processors?
> > Microchip's site is hard to navigate for me because
> > I'm on a modem.
> >
> > Thanks,
> >
> > -James Jefferson KB0THN

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8. [picsig] 16F62x

From: "Mike Berg" <mikeberg@tds.net>
Date: Wed, 29 May 2002 17:47:14 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-81910-2002.05.29-18.22.59--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The 16F627 makes a nice modemless packet TX interface.
Breadboarded one last winter to capture the position
data from a Tripmate and beacon it to PCSAT.
The onboard 4 bit DAC with an opamp buffer and
a little filtering is a very flexible tone source.
The extra memory and timers are also very handy.
Only "nit-noid" type problem was my Warp-13 programmer
requires using a socket with pin #10 removed to isolate
that pin from the programmer. Some sorta conflict that
wouldn't let it work otherwise.

73
Mike Berg N0QBH

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June 2002

Original source file: picsig.0206
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0206

1. [picsig] No Positon info with Pic-e

From: "Steve Westerfeld" <westers@attglobal.net>
Date: Tue, 11 Jun 2002 11:24:5
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-84389-2002.06.11-12.00.35--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

My Pic-e won't output any position info but it detects a valid signal and
outputs the first line with call etc. Just a few chars on the second
line.
I'm using aprspeed.asm and aprspeed2.asm with same results. I'm feeding it
inverted ttl froma Rockwell GPS board which has 4 digits after the decimal
point. Is that my problem??

Steve
73's
KE5LF

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2. [picsig] Why 16F84A?

From: David Willmore <davidwillmore@iamanidiot.com>
Date: Mon, 17 Jun 2002 17:28:19 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-85440-2002.06.17-16.47.07--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Okay, I've been out of PIC use for a while--the F's
were just coming into use when I got out. So, there's
been a lot of development since then.   I'm getting
re-educated, but one thing just doesn't seem to make
sense.

Why do people use the 16F84(A)? Why not the 16F627
which appears to be cheaper and have more on chip
goodies?

I haven't looked in a great level of detail, but it
even looks to be a proper upwards compatible part.
Can you not just drop in in place of a 16F84? Maybe
it requires code changes that people don't want to
make? Sure, the ISP will be a little different--I
would imagine, but that's only going to effect people
in a production type environment.

I have estimates from DigiKey for 25 unit quantity of:
PIC16F84A (20 MHz PDIP) 3.69 (USD)
PIC16F627 (20 MHz PDIP) 1.95 (USD)

That's about half off!

All I can tell is that the F84A is part of this 'old
school' stock and that microchip must produce it with
old production lines that cost more to maintain or
maybe it's fallen out of favor and isn't as large of
a volume part as it used to be and that's raised
costs.

I must be missing something. Can anyone explain
this to me? I'm going to get a tube on one of them,
but I'm cautious as I think I must be missing something.

Cheers,
David

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] Re: Why 16F84A?

From: "James Jefferson" <jjeffers@deskmedia.com>
Date: Mon, 17 Jun 2002 16:16:58 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-85444-2002.06.17-16.54.05--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

David - basically everything you said was correct. The 16F84A is a
legacy part. The newer PICS can be pin compatible, but you will need
some code changes. The 16F628 comes up with port a analog, for example.
So go with the new parts for new designs, the 16F84 is just there for
compatibility.

-Jim KB0THN

> Okay, I've been out of PIC use for a while--the F's
> were just coming into use when I got out. So, there's
> been a lot of development since then.   I'm getting
> re-educated, but one thing just doesn't seem to make
> sense.
>
> Why do people use the 16F84(A)? Why not the 16F627
> which appears to be cheaper and have more on chip
> goodies?
>
> I haven't looked in a great level of detail, but it
> even looks to be a proper upwards compatible part.
> Can you not just drop in in place of a 16F84? Maybe
> it requires code changes that people don't want to
> make? Sure, the ISP will be a little different--I
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> in a production type environment.
>
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> PIC16F627 (20 MHz PDIP) 1.95 (USD)
>
> That's about half off!
>
> All I can tell is that the F84A is part of this 'old
> school' stock and that microchip must produce it with
> old production lines that cost more to maintain or
> maybe it's fallen out of favor and isn't as large of
> a volume part as it used to be and that's raised
> costs.
>
> I must be missing something. Can anyone explain
> this to me? I'm going to get a tube on one of them,
> but I'm cautious as I think I must be missing something.
>
> Cheers,
> David
>
> ---
> You are currently subscribed to picsig as: jjeffers@deskmedia.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] Re: Why 16F84A?

From: David Willmore <davidwillmore@iamanidiot.com>
Date: Mon, 17 Jun 2002 17:54:50 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-85447-2002.06.17-17.13.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> David - basically everything you said was correct. The 16F84A is a
> legacy part. The newer PICS can be pin compatible, but you will need
> some code changes. The 16F628 comes up with port a analog, for example.
> So go with the new parts for new designs, the 16F84 is just there for
> compatibility.

Thanks, Jim. That's sort of what I suspected. Sad to think I missed a
whole product lifecycle. :) Now I just have to decide between the
12F629/675 and the 16F627/628. Do I need an ADC or not and how much
program space? I'll probably wase the money and get the higer end
parts of both pairs. :) I'll probably go with the 675 as 10 bits of
A/D would make this splendid for battery charger use. And since it
has 1K-word of program space, might as well get the 628 for stuff that
will only fit in 2K. :)

Thanks, all!

Cheers,
David

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] RE: Why 16F84A?

From: "Rich Carter" <ke1ev@arrl.net>
Date: Tue, 18 Jun 2002 09:50:33 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-85601-2002.06.18-09.23.05--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

For that matter, why don't you use the 16F876? The '876 lets you use an
inexpensive debugger and provides a lot more program space. Or at least use it
for development and build your final project with any other midrange chip.

BTW: the F628 is upward compatable with the F84.

What kind of project are you developing?

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of David Willmore
> Sent: Monday, June 17, 2002 6:28 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Why 16F84A?
>
>
>
> Okay, I've been out of PIC use for a while--the F's
> were just coming into use when I got out. So, there's
> been a lot of development since then.   I'm getting
> re-educated, but one thing just doesn't seem to make
> sense.
>
> Why do people use the 16F84(A)? Why not the 16F627
> which appears to be cheaper and have more on chip
> goodies?
>
> I haven't looked in a great level of detail, but it
> even looks to be a proper upwards compatible part.
> Can you not just drop in in place of a 16F84? Maybe
> it requires code changes that people don't want to
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> old production lines that cost more to maintain or
> maybe it's fallen out of favor and isn't as large of
> a volume part as it used to be and that's raised
> costs.
>
> I must be missing something. Can anyone explain
> this to me? I'm going to get a tube on one of them,
> but I'm cautious as I think I must be missing something.

>
> Cheers,
> David
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

6. [picsig] why my mail always can't apear correctly?

From: Zhang Yubing <yubingz@21cn.com>
Date: Tue, 18 Jun 2002 23:9:36 +0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-85609-2002.06.18-10.41.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

if the mail's format is wrong how can I do?

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7. [picsig] RE: Why 16F84A?

From: David Willmore <davidwillmore@iamanidiot.com>
Date: Tue, 18 Jun 2002 11:43:28 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-85614-2002.06.18-11.02.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> For that matter, why don't you use the 16F876? The '876 lets you use an
> inexpensive debugger and provides a lot more program space. Or at least use it
> for development and build your final project with any other midrange chip.

Hmm, well, because the 628 is 2.21 in 25 unit quanity and the 876 is 5.03? :)
It's also go a ton of stuff on it I don't need, it's physically much larger.
I could buy a little over two 628s for each one... :)

You do make a good point on using it for development, but isn't there a simulator
available? Most of the stuff I have in mind would work best in that kind of
environmrnt.

> BTW: the F628 is upward compatable with the F84.

Good to know. ;)

> What kind of project are you developing?

Uhh, a few things. The first is a tool called a MultiBoot cable for the
Gameboy Advance. This game system has a way of being booted over a serial
connection--without any kind of cartridge being inserted. So, you can dump
256KB of code into it--which is a pretty hefty size. As I'd like to use
a GBA as a user interface for some ham projects, I thought that this cable
would be a good start. Since it uses a PIC to convert from RS-232 to the
serial protocol spoken by the GBA, I had to get back into PICs, so why not
really get back in? :)

Also, I've recently moved to NJ and joined the NJQRP club--which is very
active in developing a ton of cool projects. Some of them have PICs in
them. Since I did some PIC work back in college ('93), I have a bit of
a fondness for these little guys. They've really done well since then.
I think we were using a 16C84, so I like this specific family, too. :)

I've been interested in VLF communications, so there is room for a QRSS,
WOLF, PSK, etc. beacon transmitters. General purpose automation work
would suit them, well, too. I've got some batteries that need charged
and I don't trust most commercial chargers to do the job. If I built
one and spoke to it over a serial line, I could do a lot in software
on a PC--capacity estimation, lifecycle monitoring, inventory management,
fault detection, etc.

What I really want is the tiny little 12F675s, but they're not released,
yet and microchip doesn't seem to be willing to say just when. Does anyone

know and can they tell? I'm not looking for trade secret data, but if there
is a presentation somewhere online that I missed, I'd love to hear it.

Cheers,
David

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8. [picsig] 16F628 programming voltage

From: David Willmore <davidwillmore@iamanidiot.com>
Date: Mon, 24 Jun 2002 14:27:04 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-86469-2002.06.24-13.45.52--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've been reading through the programming document for the 16F628
and I'm a bit confused. They mention entering a low voltage
programming mode. But, they don't go on to say much about it.

I would guess that it turns on a charge pump to make the high voltage
needed to program the FLASH or EEPROM. If you give it high voltage,
you don't need it, right? I'm just concerned with how much power
this chip takes during programming with and without this mode set.

Have I missed the point of this mode?

Cheers,
David

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9. [picsig] Re: 16F628 programming voltage

From: Jim Chandler <jim@chandler.net>
Date: Mon, 24 Jun 2002 18:09:54 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: davidwillmore@iamanidiot.com
Message-ID: <LYR6890-86504-2002.06.24-18.47.30--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I just use my Pic-E to program 16F628s. Works great. Anyone else done this?

Jim

On Mon, 24 Jun 2002 14:27:04 -0500
David Willmore <davidwillmore@iamanidiot.com> wrote:

>
> I've been reading through the programming document for the 16F628
> and I'm a bit confused. They mention entering a low voltage
> programming mode. But, they don't go on to say much about it.
>
> I would guess that it turns on a charge pump to make the high voltage
> needed to program the FLASH or EEPROM. If you give it high voltage,
> you don't need it, right? I'm just concerned with how much power
> this chip takes during programming with and without this mode set.
>
> Have I missed the point of this mode?
>
> Cheers,
> David
>
> ---
> You are currently subscribed to picsig as: jim@chandler.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

10. [picsig] Re: 16F628 programming voltage

From: David Willmore <davidwillmore@iamanidiot.com>
Date: Tue, 25 Jun 2002 19:03:05 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: picsig@lists.tapr.org

Message-ID: <LYR6890-86693-2002.06.25-18.22.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I don't have one of those. I was just going to wire the thing
to the parallel port and cross my fingers. :) If I can make
sense of the programming documentation. I think I'll write up
an English version of that document when I get done with this.

Chers,
David

> I just use my Pic-E to program 16F628s. Works great. Anyone else done this?
>
> Jim
>
> David Willmore <davidwillmore@iamanidiot.com> wrote:
> > I've been reading through the programming document for the 16F628
> > and I'm a bit confused. They mention entering a low voltage
> > programming mode. But, they don't go on to say much about it.
> >
> > I would guess that it turns on a charge pump to make the high voltage
> > needed to program the FLASH or EEPROM. If you give it high voltage,
> > you don't need it, right? I'm just concerned with how much power
> > this chip takes during programming with and without this mode set.
> >
> > Have I missed the point of this mode?

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11. [picsig] Re: 16F628 programming voltage

From: Jim Chandler <jim@chandler.net>
Date: Tue, 25 Jun 2002 18:37:44 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: picsig@lists.tapr.org
Message-ID: <LYR6890-86702-2002.06.25-19.15.15--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Pic-E documentation is on the TAPR website. Should be easy to
identify the programming circuit.

Jim

On Tue, 25 Jun 2002 19:03:05 -0500
David Willmore <davidwillmore@iamanidiot.com> wrote:

>
> I don't have one of those. I was just going to wire the thing
> to the parallel port and cross my fingers. :) If I can make
> sense of the programming documentation. I think I'll write up
> an English version of that document when I get done with this.
>
> Chers,
> David
>

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July 2002

Original source file: picsig.0207
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0207

1. [picsig] Write for PSR

From: "stanzepa@earthlink.net" <stanzepa@earthlink.net>
Date: Thu, 18 Jul 2002 13:17:24 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: stanzepa@earthlink.net
Message-ID: <LYR6890-90020-2002.07.18-13.02.38--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR members:

Here is your chance to become rich and famous! Well, maybe not rich, but
certainly famous.

The editorial board of Packet Status Register (PSR, TAPR□s quarterly
newsletter) is now soliciting articles, news items, etc. for the next issue
of the newsletter. Topics related to digital Amateur Radio will be given
preference and the editorial board reserves the right to determine what is
suitable for publication.

E-mail your contributions to wa1lou@tapr.org ASAP because the deadline for
the next issue of the newsletter is July 24.

73,

Stan Horzepa, WA1LOU, PSR Editor

---
mail2web - Check your email from the web at
http://mail2web.com/ .

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2. [picsig] Hi-Tech Serial Routines

From: "Jason" <KE4NYV@msn.com>
Date: Sat, 20 Jul 2002 19:47:17
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-90372-2002.07.20-20.25.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Does anyone have any simple serial routines for the Hi-Tech compiler? I
have several routines that I have found but have not had much luck with
them. One is a getch() function that gets single character from the serial
port. I need a routine that will pull a string (single-dimension array)
from the port, given the string length is set to a particular length. I
know this can be done with the getch() function and a for loop. But I have
had no luck with it.

Any help would be great. 73's
Jason KE4NYV
www.ke4nyv.com

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August 2002

Original source file: picsig.0208
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0208

1. [picsig] 2002 issue of Packet Status Register (PSR)

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Tue, 06 Aug 2002 19:56:55 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-93033-2002.08.06-19.37.37--lyris.picsig#tapr.org@lists.tapr.org>
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The summer 2002 issue of Packet Status Register (PSR) is now available at
www.tapr.org.

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] MODEM question

From: Ken Cechura <kcechura@umr.edu>
Date: Fri, 30 Aug 2002 11:19:11 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-96463-2002.08.30-11.59.28--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

building TNC from scratch. not using PIC (using other
microcontroller...for class)

what mod/demod chip (i.e. MX-COM CMX614 or similar) can do 9600 BPS as well
as 1200 (and, what the heck, even 300)...

I can see a bunch of them do 1200, and the CMX589A is whats used in the
KPC9612...but do any of these do the slower baud rates?

thanks
Ken

```
      ////////////////////////////////////////////////////
     //        Kenneth R. Cechura, KC9UMR/Ø               //
    //             kcechura@umr.edu                     //
   //           President, W0EEE, 2002                 //
  // University of Missouri-Rolla Amateur Radio Club  //
////////////////////////////////////////////////////////
```

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3. [picsig] Re: MODEM question

From: Jeff King <jeff@aerodata.net>
Date: Fri, 30 Aug 2002 12:48:02 -0500 (CDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-96489-2002.08.30-13.28.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Quoting Ken Cechura <kcechura@umr.edu>:

> building TNC from scratch. not using PIC (using other
> microcontroller...for class)
>
> what mod/demod chip (i.e. MX-COM CMX614 or similar) can do 9600 BPS as
> well as 1200 (and, what the heck, even 300)...

1200 and 300 are typical standardized audio modems, in the case of packet radio
Bell202 and Bell103. When applied to a FM radio, it is a indirect demodulation
(first you demodulate the FM signal, then demodulate the audio modem signal).
9600FSK/GMSK is a direct modulation of the RF carrier and the discrimnator
output is a direct representation of one's and zero's.

I'm not aware of any chip level product that does all of these (since they are
so different). Sound Card's and some of the DSP EVM boards can do all of these,
but of course that goes far beyond a small micro. At one point AMD made
the "world chip" I think 7910 that would do Bell 202, Bell 103, as well as V.23
and some other audio modem standards. Kantronics used it in some of their early

TNC's.

-Jeff

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4. [picsig] Re: MODEM question

From: David VanHorn <dvanhorn@cedar.net>
Date: Fri, 30 Aug 2002 14:04:09 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-96499-2002.08.30-14.44.43--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>I'm not aware of any chip level product that does all of these (since they
>are
>so different). Sound Card's and some of the DSP EVM boards can do all of
>these,
>but of course that goes far beyond a small micro. At one point AMD made
>the "world chip" I think 7910 that would do Bell 202, Bell 103, as well as
>V.23
>and some other audio modem standards. Kantronics used it in some of their
>early
>TNC's.

Indeed they did. Also the 7911, but neither did 9600.

The world chip's final demise was when rockwell put out chipsets that
insisted on hearing the V.22BIS answer tone instead of the 212A answer tone.

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5. [picsig] Re: MODEM question

From: "Marcelo Puhl" <mark@cpovo.net>
Date: Sat, 31 Aug 2002 00:49:04 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-96535-2002.08.30-23.29.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 30 Aug 2002 at 11:19, Ken Cechura wrote:

> building TNC from scratch. not using PIC (using other
> microcontroller...for class)
>
> what mod/demod chip (i.e. MX-COM CMX614 or similar) can do 9600 BPS as well
> as 1200 (and, what the heck, even 300)...
>

Take a CMX614 and feed it with 3.58MHz/4 to get a 300 bps modem.

Marcelo Puhl
http://py3ss.cjb.net

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September 2002

Original source file: picsig.0209
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0209

1. [picsig] TAPR PIC-E

From: "Franklin Mendes" <kalunga@oninet.pt>
Date: Tue, 3 Sep 2002 23:22:46 +0100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-97119-2002.09.03-18.03.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi List!

I'm novice for here and my first time trying to programmer my TAPR PIC-E was
sunk with ERROR AT ADDRESS 14, 15 or 16.
I can do a read or blank check but if I try to program I got an error.
Any help is welcome!

Thanks!

Franklin Mendes
CT1FBV

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2. [picsig] Ultimeter 2000

From: N0BHC@aol.com
Date: Thu, 5 Sep 2002 11:56:05 EDT
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-97333-2002.09.05-11.36.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Please let me know if this question is off topic for this group.

I have a Peet Ultimeter 2000 running in the complete record mode. I want to
also send the WX data to the local APRS system.

My question is; Will the PIC-E handle the selection of data from the U2K and
send the info to the VHF APRS Xcvr at regular intervals - every 20 min. for
example? I have seen some software that looks like it may do the job in the
ftp site but I'm not sure of the application.

Thanks for your help and advice.

Bob N0BHC

3. [picsig] PIC16F84, MX614 & PicBasic?

From: "Peter Bennett" <runtime@intelnet.net.gt>
Date: Thu, 12 Sep 2002 22:09:33 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98423-2002.09.12-23.46.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello,

Has someone tryied to send an AX25 packet using PIC16F84, MX614 and PicBasic
instead of C?

Thank you in advance
Peter Bennett

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] Re: PIC16F84, MX614 & PicBasic?

From: David Willmore <davidwillmore@iamanidiot.com>
Date: Fri, 13 Sep 2002 12:15:59 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98469-2002.09.13-11.57.04--lyris.picsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

> Has someone tryied to send an AX25 packet using PIC16F84, MX614 and PicBasic
> instead of C?

Nope, but I'm going to try to do a NMEA to APRS converter with a 16F628 before too long. I wasn't planning on using an MX614 for the audio, just an R2R ladder for a DAC. The rest can be done in hardware just fine, I would think. I've just got to do some reading on APRS.

On a related note, I have DDS synthesis of PSK31 at 0 to 200KHz working on a 50MHz SX28 board. I've got to get the serial support working, though. They're just like early PICs--no serial port on chip. I've got to bang on bits to see and hear while pulling 500K interupts/second. Fun. :) Oh, it currently fits in less than 256 bytes. ;)

I guess the point of mentioning that is, if I can do 500K samples/sec of PSK31 at up to 200KHz, it should be able to do 50K samples/sec of a much simpler modulation scheme with a PIC. Then again, I wouldn't be caught dead trying to program these things in a HLL. Simple assembly is the way to go.

Cheers,
David N0YMV

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5. [picsig] Re: PIC16F84, MX614 & PicBasic?

From: "HSHK" <hshk@ix.netcom.com>
Date: Fri, 13 Sep 2002 12:23:30 -0400 (Eastern Daylight Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98473-2002.09.13-12.05.19--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

David N0YMV,

Send me an email address and I'll send you some code
for the PIC that you can use as a starting point.

The code uses three pins of a PIC to generate packet
that can be fed to a mic input.

Bill KA8VIT
ka8vit@ix.netcom.com

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Friday, September 13, 2002 12:16:23
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: PIC16F84, MX614 & PicBasic?

> Has someone tryied to send an AX25 packet using PIC16F84, MX614 and
PicBasic
> instead of C?

Nope, but I'm going to try to do a NMEA to APRS converter with a 16F628
before
too long. I wasn't planning on using an MX614 for the audio, just an R2R
ladder for a DAC. The rest can be done in hardware just fine, I would think.
I've just got to do some reading on APRS.

On a related note, I have DDS synthesis of PSK31 at 0 to 200KHz working on a
50MHz SX28 board. I've got to get the serial support working, though. They
re
just like early PICs--no serial port on chip. I've got to bang on bits to
see and hear while pulling 500K interupts/second. Fun. :) Oh, it currently
fits in less than 256 bytes. ;)

I guess the point of mentioning that is, if I can do 500K samples/sec of
PSK31
at up to 200KHz, it should be able to do 50K samples/sec of a much simpler
modulation scheme with a PIC. Then again, I wouldn't be caught dead trying
to
program these things in a HLL. Simple assembly is the way to go.

Cheers,
David N0YMV

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

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6. [picsig] PIC Packet...

From: "Mike Berg" <mikeberg@tds.net>
Date: Sat, 14 Sep 2002 09:04:53 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98565-2002.09.14-09.46.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Subject: Re: PIC16F84, MX614 & PicBasic?
From: David Willmore <davidwillmore@iamanidiot.com>
Date: Fri, 13 Sep 2002 12:15:59 -0400
X-Message-Number: 1

> Has someone tryied to send an AX25 packet using PIC16F84, MX614 and PicBasic
> instead of C?

Nope, but I'm going to try to do a NMEA to APRS converter with a 16F628 before
too long. I wasn't planning on using an MX614 for the audio, just an R2R
ladder for a DAC. The rest can be done in hardware just fine, I would think.
I've just got to do some reading on APRS.

Cheers,
David N0YMV

I'd recommend using the on board DAC built in to the PIC 627/8
instead of a R2R ladder. All you need is a rail to rail op amp
configured as a voltage follower to buffer the output.
I used this method along with a Phase Increment Register (PIR)
routine to transmit parsed GPS data to the USNA APRS satellite
last winter.   It worked FB.
I still have the assembly code if someone would like to play with it.
73
Mike Berg   N0QBH

7. [picsig] Re: PIC Packet...

From: David Willmore <davidwillmore@iamanidiot.com>
Date: Sat, 14 Sep 2002 12:00:27 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98576-2002.09.14-11.41.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> I'd recommend using the on board DAC built in to the PIC 627/8
> instead of a R2R ladder. All you need is a rail to rail op amp=20
> configured as a voltage follower to buffer the output.
> I used this method along with a Phase Increment Register (PIR)
> routine to transmit parsed GPS data to the USNA APRS satellite
> last winter.   It worked FB.
> I still have the assembly code if someone would like to play with it.
> Mike Berg   N0QBH

DAC built into the 627/8? There is no DAC listed on the features nor
mentioned in the datasheet. Do you mean the PWM with a LPF? I was
just going to use an R2R as it's simple and reliable. :) I've looked
at using the PWM output, but it doesn't run very fast.

I'd be glad to look at the code, but as I told another helpful person
before, I'm going to GPL whatever I end up producing, so if the code
in question isn't capable of that, I can't use it.

This project looks really easy. :) The chips has a serial port,
so that part is simple. I know how to modulate BPSK by hand, so
that part is simple. The only other part is parsing the GPS/NMEA
data and framing the UI/APRS packet. How hard can that be? ;)

Cheers,
David

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8. [picsig] OT - a bit!: DDS on SX28 vs. PIC

From: "David Beach" <dbeach@blvl.igs.net>
Date: Sat, 14 Sep 2002 12:01:54 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98577-2002.09.14-11.43.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

1) I have taken the liberty of renaming the thread
2) I am not trying to start a Holy War on SX vs. PIC (I just don't have any
SX development tools and am too cheap to buy anymore 'stuff' right now)

That being said....

Although most of the common flashable PIC chips aren't up to SX speeds, do
you think its possible to do the DDS stuff in one of the common PICs? I know
the NJQRP/George Heron article in QST about the 'PSK beacon' used an SX
chip - so they obviously thought it was easier/possible with the SX. Has
anyone tried with the PICs? Or is it just not do-able?

Getting a non-sound card based PSK modulator would help make PSK 'portable'.
Low power modes and portability fit nicely. Of course, the input device
(keyboard) might not be very portable. Maybe a CW to text converter?!

David Beach
VE3STI, Picton, ON

----- Original Message -----
From: "David Willmore" <davidwillmore@iamanidiot.com>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Friday, September 13, 2002 12:15 PM
Subject: [picsig] Re: PIC16F84, MX614 & PicBasic?

> On a related note, I have DDS synthesis of PSK31 at 0 to 200KHz working on
a
> 50MHz SX28 board. I've got to get the serial support working, though.
They're
> just like early PICs--no serial port on chip. I've got to bang on bits to
> see and hear while pulling 500K interupts/second. Fun. :) Oh, it
currently
> fits in less than 256 bytes. ;)
>

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9. [picsig] Re: OT - a bit more!: DDS on SX28 vs. PIC

From: David Willmore <davidwillmore@iamanidiot.com>
Date: Sat, 14 Sep 2002 12:28:31 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98581-2002.09.14-12.09.40--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> 1) I have taken the liberty of renaming the thread
> 2) I am not trying to start a Holy War on SX vs. PIC (I just don't have any
> SX development tools and am too cheap to buy anymore 'stuff' right now)

I splurged and got the cheap SX-blitz from parallax. I didn't think I'd
need the debug ability. I was half right. I need it, but it looks like
it's a bit cripled--if you're used to full hardware emulators.

> That being said....
>
> Although most of the common flashable PIC chips aren't up to SX speeds, do
> you think its possible to do the DDS stuff in one of the common PICs? I know
> the NJQRP/George Heron article in QST about the 'PSK beacon' used an SX
> chip - so they obviously thought it was easier/possible with the SX. Has
> anyone tried with the PICs? Or is it just not do-able?

Okay, baseline speed numbers. At 50MHz (the max normal speed for the SX
family), the SX28 does 50 8bit MIPS. At 20MHz (the max normal speed for
some versions of the PICs), the 628 does 5 8bit MIPS. So, we're at a 10
to 1 ratio already.

That doesn't end things as if they are as efficient instruction for instruction,
then there isn't any reason that my code can't run at 50KHz on a PIC--but
this assumes a lot. The code, as you can imagine, is pretty heavily tuned

to the arch of the proc. I'm just getting back into PIC programming after
about a 10 year absence, so give me a few moments to come back up to speed. :)

At a 50KHz sample rate, you could easily generate clean PSK31 throughout
the 0-20KHz audio passband. So, yes, it looks doable for most practical
uses. I wanted a direct to RF approach for the upcoming VLF allocation,
so the PIC was too slow for me.

The speed critical section of the PSK31 code is this:
Do two 32 bit additions (for the phase accumulators)
Do an 8 bit sine table lookup (64 entry table offset a half sample so that
quadrature folding will work).
8x8 bit multiplication

On the SX, I can do that plus interupt enter/exit in 82 clocks--osc clocks,
not instruction clocks. I don't think I'm going to do that on a PIC. :)

> Getting a non-sound card based PSK modulator would help make PSK 'portable'.
> Low power modes and portability fit nicely. Of course, the input device
> (keyboard) might not be very portable. Maybe a CW to text converter?!

There was talk of Palm to PIC to radio. :) The big problem in that case is
receive. Decoding PSK31 is a lot harder than sending it. But, I am looking
into that problem as well. What I will say in that case is now, for sure,
the PIC is *too slow*. :) Barring a miracle. :)

The funny thing here is that George Heron is the guy who got me started with
this. It was looking at his PSK31 audio beacon (find it on www.njqrp.org)
and saying that it should be able to do more--and wanting to learn to program
the SX family--that spawned this project. If/when I get the code done, it
will become the next version of the audio/RF beacon.

Here's a rundown of what it's expected to do:
PSK31, CW, QRS(s), Dif-CW, and MSK16.

Currently PSK31 can be safely synth'd up to 200KHz because of the 500 KHz
sampling rate. It seems possible to run some of the other modes faster,
but there may be no reason to. Unless I can make 455KHz and go direct to
IF, what need is there for >200KHz?

Conversely, once finished with the SX version, I intend to scale the project
down to a 16F628. It solves some of the problems with the SX design. The
SX has no serial port nor EEPROM. The EEPROM is easy to add with a little
93C66 or such, but the serial is the old fashoned bang on the bits type.
The 628 has a hardware serial port, so that gets simpler.

Okay, on the holy war front, I've found the SX assembly to be better organized
than the mid range PIC assembly. Now, there's two caviets that I want to
add to that. One is that I am using *raw* assumbly, not one of the cooked
up macro packages that make the chips (either one) look like an 8051 or
similar. I program in the assembly of the actual chip, so I may see warts
that people living higher up don't get to see. Secondly, I'm coming off
programming for the SX family. That means I currently have my mind bent
in the right shape for SX code to make sense. That filters my perceptions
a bit and may be blinding me to the beauty of the mid range PICs. I'll
decide when I'm done with this SX portion and get to the PIC side. Who
knows, maybe I'll be a true believer, yet. ;)

Each chip has its purpose. The SX is faster, the PIC is lower power and
cheaper. They're both about as easy to use. So, pic what you need and
spend your energy programming, not bickering about which is 'best'. :)

Cheers,
David N0YMV

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10. [picsig] Re: OT - a bit more!: DDS on SX28 vs. PIC

From: David VanHorn <dvanhorn@cedar.net>
Date: Sat, 14 Sep 2002 12:05:52 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98583-2002.09.14-12.46.28--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>Okay, baseline speed numbers. At 50MHz (the max normal speed for the SX family), the SX28 does 50 8bit
 MIPS. At 20MHz (the max normal speed for some versions of the PICs), the 628 does 5 8bit MIPS. So,

we're at a 10 to 1 ratio already.

Then there's the AVRs that run 8-16 Mhz and roughly 1 mips/mhz and have vectored interrupts, no pages, PWM outputs, and much more efficient architecture in general. All AVRs are flashable, from the 8 pin tinys, through the 40 pin+ megas.

IMHO, the Ubicomm chips are best suited for applications where you can't get the on-chip peripherals you need. By the time you put in the code and spend the cycles building your peripherals, you chew up a lot of the chip.

>The speed critical section of the PSK31 code is this:
>Do two 32 bit additions (for the phase accumulators)

Assuming the data is in registers, that's four instructions per.
It helps a great deal having 32 registers for data, instead of one (w)

>Do an 8 bit sine table lookup (64 entry table offset a half sample so that quadrature folding will work).

load the pointer (2), add offset (2), and fetch data, five clocks

>8x8 bit multiplication

One instruction

Int enter and exit, status register save 6 clocks.

Sounds like a bit over a uS per, at 16 MHz clock. 20 instructions.

>On the SX, I can do that plus interupt enter/exit in 82 clocks--osc clocks,
>not instruction clocks. I don't think I'm going to do that on a PIC. :)

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11. [picsig] Re: OT - a bit!: DDS on SX28 vs. PIC

From: "Marcelo Puhl" <mark@cpovo.net>
Date: Sat, 14 Sep 2002 14:10:09 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98584-2002.09.14-12.50.35--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi David,

Go for Atmel AVR processors wneh you need speed plus low cost.

On 14 Sep 2002 at 12:01, David Beach wrote:

> Although most of the common flashable PIC chips aren't up to SX speeds, do
> you think its possible to do the DDS stuff in one of the common PICs? I know
> the NJQRP/George Heron article in QST about the 'PSK beacon' used an SX
> chip - so they obviously thought it was easier/possible with the SX. Has
> anyone tried with the PICs? Or is it just not do-able?
>
> Getting a non-sound card based PSK modulator would help make PSK 'portable'.
> Low power modes and portability fit nicely. Of course, the input device
> (keyboard) might not be very portable. Maybe a CW to text converter?!
>
> David Beach
> VE3STI, Picton, ON
>

Marcelo Puhl
http://py3ss.cjb.net

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12. [picsig] Re: OT - a bit more!: DDS on SX28 vs. PIC

From: "Marcelo Puhl" <mark@cpovo.net>
Date: Sat, 14 Sep 2002 14:10:09 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98586-2002.09.14-12.50.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 14 Sep 2002 at 12:28, David Willmore wrote:

>
> Okay, baseline speed numbers. At 50MHz (the max normal speed for the SX
> family), the SX28 does 50 8bit MIPS. At 20MHz (the max normal speed for
> some versions of the PICs), the 628 does 5 8bit MIPS. So, we're at a 10
> to 1 ratio already.

Atmel AVRs can reach 10 MIPS and they are cheap.

>
> Conversely, once finished with the SX version, I intend to scale the project
> down to a 16F628. It solves some of the problems with the SX design. The
> SX has no serial port nor EEPROM. The EEPROM is easy to add with a little
> 93C66 or such, but the serial is the old fashoned bang on the bits type.
> The 628 has a hardware serial port, so that gets simpler.

Atmel AT90S8535 has internal EEPROM, ADC and serial port. It can do 8 MIPS.

> Okay, on the holy war front, I've found the SX assembly to be better organized
> than the mid range PIC assembly. Now, there's two caviets that I want to
> add to that. One is that I am using *raw* assumbly, not one of the cooked
> up macro packages that make the chips (either one) look like an 8051 or
> similar.

The AVR assembly is very similar to the 8051. It is very easy to use.

>
> Each chip has its purpose. The SX is faster, the PIC is lower power and
> cheaper. They're both about as easy to use. So, pic what you need and
> spend your energy programming, not bickering about which is 'best'. :)
>

Maybe Atmel is an alternative?

> Cheers,
> David N0YMV
>

Regards,

Marcelo Puhl
http://py3ss.cjb.net

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13. [picsig] Re: OT - a bit more!: DDS on SX28 vs. PIC

From: David VanHorn <dvanhorn@cedar.net>
Date: Sat, 14 Sep 2002 12:17:12 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98588-2002.09.14-12.57.48--lyris.picsig#tapr.org@lists.tapr.org>
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>
>Atmel AVRs can reach 10 MIPS and they are cheap.

16 Mips. A few instructions take two clocks, almost all are single clock.

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14. [picsig] Re: OT - even more!: DDS on SX28 vs. AVR

From: David Willmore <davidwillmore@iamanidiot.com>
Date: Sat, 14 Sep 2002 14:16:58 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98595-2002.09.14-13.58.11--lyris.picsig#tapr.org@lists.tapr.org>
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There seems to be a strong AVR contingent speaking up here, so I'll address it.

> Then there's the AVRs that run 8-16 Mhz and roughly 1 mips/mhz and have vectored interrupts, no pages,
 PWM outputs, and much more efficient
> architecture in general. All AVRs are flashable, from the 8 pin tinys, through the 40 pin+ megas.

Yes, and they have an 8051 like arch--which is not a compliment. They are
a good deal more expensive and the ones with the features mentioned below
are 40 pin monsters. Might as well drop in a StrongArm or something.

> IMHO, the Ubicomm chips are best suited for applications where you can't get the on-chip peripherals
you need. By the time you put in the co
> de and spend the cycles building your peripherals, you chew up a lot of the chip.

Mostly true. One person has done a DDS application using an AVR, but
his code is closed, so I don't know how he's done it. My code is open
and can be reused. So, there are more issues outside the scope of this
discussion which matter.

> >The speed critical section of the PSK31 code is this:
> >Do two 32 bit additions (for the phase accumulators)
>
> Assuming the data is in registers, that's four instructions per.
> It helps a great deal having 32 registers for data, instead of one (w)

The AVR has 32 8 bit registers. That's not enough to keep all of this in
register. The 2 DDSs take up 16 bytes alone. Can you fit the rest of the
code into 16? The register banking of the SX is a helpful feature, here.
You can easily segregate variables into local and global and efficiently
use all of memory. Accessing any memory outside of the register bank costs
you 2 clock cycles. You lose the upper 6 GP regs to the X, Y, and Z 'registers'.

I'm not sure how you get 1 register for the SX. It has 32 registers visible
at any time. The lower 16 are 8 GP plus the 8 I/O registers. The upper 16
are a switchable bank that can point to all the rest of memory. The operations
for the SX are just like the AVR--most ops take an implicit X/Y/Z (w) register
and one GP register as arguements.

> >Do an 8 bit sine table lookup (64 entry table offset a half sample so that quadrature folding will
work).
>
> load the pointer (2), add offset (2), and fetch data, five clocks

With 4K words of program space (16 bit instructions * 4K words=8K bytes) you
can probably afford to be wasteful of space and just store a raw 8 bit sine
table, so you're right to leave out the 'folding' instructions.

> >8x8 bit multiplication
>
> One instruction

On the larger processors, yes. On the rest of the family, there is no
multiply.

> Int enter and exit, status register save 6 clocks.
>
> Sounds like a bit over a uS per, at 16 MHz clock. 20 instructions.

Which proc can you clock at 16MHz? I'm looking at the Digikey catalog
and I don't see any parts greater than 8 MHz except for some 128K
'MegaAVR' parts that go for about $17(USD).

So, 20 clocks at 8MHz it comes out to 2.5uS. For the SX, it comes out
to 1.64uS.

I think bringing the AVR parts into the discussion really goes too far
off topic. The PIC parts are good because you can fit a lot of functionality
into 512/1K/2K or space. They have enough RAM to hold most reasonable
problems. They have enough I/O capability to go along with that, as well.
Add to that the fact that they're cheap--the 12F675 is 1.21 and the 16F628
is $2.29--and pretty low power and you get something that solves most
problems that anyone comes up with.

The Ubicom parts, as you point out, are fond of their 'virtual peripherials'

concept wherin you trade code space and speed for I/O flexability. They're
probably about 2x the cost of a similar PIC, but they solve a lot of things
that a PIC doesn't--but the cost is a lot more power.

The AVRs are priced around the Ubicom chips, but don't add much--until you
get into the large parts which are 2x the Ubicom and 4x to 8x the PICs.
That just doesn't seem like they're designed to solve the same problems.
I'm sure they have their uses, I just can't think of any.

Let's take this off list, now, as we've wondered a bit off topic.

Cheers,
David

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15. [picsig] Re: PIC Packet...

From: Jeff King <jeff@aerodata.net>
Date: Sat, 14 Sep 2002 15:11:35 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98597-2002.09.14-14.48.27--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Sat, 14 Sep 2002 12:00:27 -0400, David Willmore wrote:
>>I'd recommend using the on board DAC built in to the PIC 627/8

>DAC built into the 627/8? There is no DAC listed on the features nor
>mentioned in the datasheet.

There is no DAC per say in the 627/628. But, he might mean the programmable
voltage reference for the comparators which can be made into a DAC of sorts.
I believe there was a application note on this although it might be in the
620/621 series (which was a earlier OTP version of this part).

-Jeff

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16. [picsig] Re: OT - even more!: DDS on SX28 vs. AVR

From: David VanHorn <dvanhorn@cedar.net>
Date: Sat, 14 Sep 2002 14:10:45 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98598-2002.09.14-14.51.19--lyris.picsig#tapr.org@lists.tapr.org>
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>
>Yes, and they have an 8051 like arch--which is not a compliment.

In what way do you mean "8051-like"?

> They are a good deal more expensive and the ones with the features mentioned below are 40 pin
monsters. Might as well drop in a StrongArm or something.

There are quite a few choices, ranging from 8 pin up.

I just finished a fun project in an AVR2343, an emulation of the Whelen slimlighter. The 2343 is an 8
pin chip with 1kword code space, 128 bytes of ram, 128 bytes of EEPROM, one 5 bit I/O port, and a
timer. No external crystal or caps needed. Plenty of code/register/ram/ee space left for other stuff,
but in this app, I don't need it.   The code is public on avrfreaks, or I can email to anyone
interested.   You need a 5V supply to run the chip (zener, R, Cap) and a pair of mosfets to switch the
LED banks. An SPST pushbutton selects the flash patterns, which are programmable in ROM.

>The AVR has 32 8 bit registers. That's not enough to keep all of this in register.

Few significant apps can be held entirely in registers. That's what ram is for.

> The 2 DDSs take up 16 bytes alone. Can you fit the rest of the code into 16?

Most likely yes. (Not having seen the code..) The registers would normally only be used for frequently
accessed data. Otherwise, stick it in ram, and spend a couple cycles on fetch and store.

>The register banking of the SX is a helpful feature, here.
>You can easily segregate variables into local and global and efficiently use all of memory. Accessing any memory outside of the register bank costs you 2 clock cycles.

Why do you need segregation? I'm perfectly happy with storing data in registers and ram, and accessing it as appropriate.

>You lose the upper 6 GP regs to the X, Y, and Z 'registers'.

Only if-when you use them as pointers.

>I'm not sure how you get 1 register for the SX. It has 32 registers visible at any time.

Are you able to use most instructions in most registers, or is it PIC-like, where everything walks through the "W" register?

>The lower 16 are 8 GP plus the 8 I/O registers.

The lower 16 AVR registers are all GP. R0 is used with the LPM instruction, but can be used with most other instructions as well. All I/O registers have their own space.

>The upper 16 are a switchable bank that can point to all the rest of memory.

The upper 16 avr registers are all GP, three pairs can be used as pointers. Ram has it's own space.

>With 4K words of program space (16 bit instructions * 4K words=8K bytes) you can probably afford to be wasteful of space and just store a raw 8 bit sine table, so you're right to leave out the 'folding' instructions.

Either way is fine with me. If speed is what we're coding for, then I'll use a larger table.

>Which proc can you clock at 16MHz?

Try a mega-8

>So, 20 clocks at 8MHz it comes out to 2.5uS. For the SX, it comes out to 1.64uS.

So at 16 MHz, 1.25uS, and I don't have to spend space/cycles building common peripherals like timers and uarts.

You got vectored ints in the pic or Ubicomm parts?
Did you include code to sort out which ints are enabled, and then to sort out which int actually happened, as is required in the PIC?
In the avr, the code simply pushes the return address, and jumps to the int vector, which is a jump to the ISR for that int.

>I think bringing the AVR parts into the discussion really goes too far off topic.

Well, they aren't pics, but then neither are the Ubicomm devices.

> The PIC parts are good because you can fit a lot of functionality
>into 512/1K/2K or space.

As if this wasn't true of the AVRs? When I don't have to set page registers every whipstich, I get that much more code space.

> They have enough RAM to hold most reasonable problems. They have enough I/O capability to go along with that, as well.

Again, as if this wasn't true of the AVRs as well.

And with the pic you get a totally procrustean internal structure that makes many simple operations significantly larger/slower than they need to be.

Lets output a bit on an I/O port, and then go check the status of that pin.

```
AVR:
abi     porta,0 ;Set bit I/O port a, pin 0
sbis    pina,0  ;Skip the next instruction if bit 0 of
               ;port A's pin reg is set.
```

In the AVR, the I/O ports have three registers, Port, Pin, and DDR.
Port is outputs or pullup enable, DDR (data direction register) selects which pins are in or out, and PIN tells you the status of the physical pin, regardless of the DDR setting. So, you can set a pin as an output, and then read it as an input, without having to go through any gyrations.

In the pic, you first have to make sure you're on the right page to access the port register, then set

the bit, then flip pages again, then check the input pin, and oh yeah, don't forget about the pic's read-mod-write problem. You end up spending something like 16 clocks vs the avr's two clocks.

What's the use of this? In one PIC project I did (commercial app) we were running tight on pins, and we put four jumpers on one pin, using four resistors and a cap to sense which jumpers are in place.
In the AVR, this is a trivial bit of code, but in the PIC, it ended up as a monstrosity, due to the number of page-flips that have to be done. It's a nice simple example of how much more mess it takes to get anything done in the PIC vs the AVR.

In the pic, everything has to funnel through the W register.
In the AVR, the upper 16 registers work as targets for all instructions, and the lower 16 are valid targets for most instructions. So, I can load data from SRAM directly into target registers, then do whatever operations are needed directly on the target registers.

Code becomes much more efficient when you remove the bottlenecks. The AVR's architecture is much closer to the Z8 than the 8051. In the Z8, all ram is registers, any pair is a pointer, and all instructions work with all registers as targets. Unfortunately, they divide the clock by 12(!) and their support is awful. Many devices are only available in OTP or mask rom.

>Add to that the fact that they're cheap--the 12F675 is 1.21 and the 16F628 is $2.29--and pretty low power and you get something that solves most problems that anyone comes up with.

There are cheap AVRs too, but I don't think a $1-2 difference is significant in hobby projects.

>I'm sure they have their uses, I just can't think of any.

Not my fault.

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17. [picsig] Atmel vs. PIC

From: Jeff King <jeff@aerodata.net>
Date: Sat, 14 Sep 2002 15:17:23 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98599-2002.09.14-14.54.15--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Note: This is not flamebait

Serious question, I've seen the testimonies regarding how much better the Atmel is then PIC... seems hands down. Yet the PIC's outsell Atmel.

Any guess as to why this is?

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I'm looking again at switching so a few comments from those that stuck with PIC over atmel would be helpful.

-Jeff

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18. [picsig] Re: Atmel vs. PIC

From: David VanHorn <dvanhorn@cedar.net>
Date: Sat, 14 Sep 2002 14:40:21 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98602-2002.09.14-15.21.02--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 03:17 PM 9/14/2002 -0400, Jeff King wrote:
>Note: This is not flamebait
>
>Serious question, I've seen the testimonies regarding how much better the Atmel is then PIC... seems hands down. Yet the PIC's outsell Atmel.
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In volume, they are somewhat cheaper for equivalent horsepower.
In my experience, it takes twice as long to write for the PIC, but you only have to write code once, and over 100,000 processors, that fades to near zero cost. Others may have different experience, but I can only speak for myself, and the other projects I have direct knowledge of.

A man-year of code at $60-$100k is a big investment.
In a hobby project, I figure my time is by FAR the most expensive item, and the cost of the bits is essentially noise. After all, how many will I build? 1? 100?

In a commercial project, if I can save $0.50 each by using a PIC, then I need to figure how much longer it will take to write the code, and see if that ends up as less money in the long run. If there will be additional development, then the cost of the development time ends up more important.

How many of these hobby projects with PICs do you think actually looked at other processors before selecting the PIC? The PIC, through Mchip's marketing geniuses, has become the default processor for hobby projects.

People tend to stick to what they know. Mchip is very good at supporting the hobby market, knowing that maybe 1% of those hobbyists will end up using PICs in real projects. I wouldn't have picked up on the AVRs except that a client recommended them to me. At the time, I was well into Z8 development, had all the tools, and could have done the job just fine in the Z8. However, the Z8 is pretty limited in horsepower (1 Mips @ 12 MHz), isn't flash, and has pretty limited peripherals, relative to the AVR. Also, their development support SUCKS.

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Happens with everyone eventually. Digikey and the distis have stock on just about everything. There was a time when I couldn't buy 74HC154's for less than $5, but I didn't rule out HC logic because of that.

>I'm looking again at switching so a few comments from those that stuck with PIC over atmel would be helpful.

Well, those are the reasons that I would have used the Pics, if I could make them add up.
:)

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19. [picsig] Re: Atmel vs. PIC

From: Jeff King <jeff@aerodata.net>
Date: Sat, 14 Sep 2002 15:51:17 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98604-2002.09.14-15.28.12--lyris.picsig#tapr.org@lists.tapr.org>
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Let me make sure I understand what you are saying here.

You are suggesting you would stay with the PIC? That seems to be what I am reading. Actually kinda suprized you'd say this as you are one of the most die-hard Atmel supporters I have known. But the reasons you point out are quite valid.

Personally, my experience with the MicorChip Detroit sales office has been less then stellar (the FAE is good but the sales force sucks). Can't even get them to return calls and we are talking $50K-100K volume a year (and this project I am working on now is looking like 1M pieces year). Fortunately for MicroChip, the national support is good.

Atmel's local reps seem interested however.

-Jeff

--
Jeff King, jeff@aerodata.net on 09/14/2002

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20. [picsig] Re: Atmel vs. PIC

From: David VanHorn <dvanhorn@cedar.net>
Date: Sat, 14 Sep 2002 15:14:57 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98606-2002.09.14-15.55.35--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 03:51 PM 9/14/2002 -0400, Jeff King wrote:
>Let me make sure I understand what you are saying here.
>

>You are suggesting you would stay with the PIC?

If it makes sense to do so, yes.
IMHO, it does not.

In volume projects, the PIC offers a small cost delta.
However, the delta in development time is large, and ends up costing me more than I gain by cheaper hardware.

Take my printer project:
I have two programmers working for me, and we will have about a man-year in code when we ship V1.0. One of the major features is field upgradability, using the AVR's self-programming ability, which means ongoing development. So I need to figure on a couple man-years on the code side. Of the four processors, three are AVRs, because we have to write for them, and maintain them. The fourth proc comes with loaded software for IRDA, and carries IRDA cert, so I'm not going to mess with that one.

I've done two commercial projects in the PIC, both were at a point where the boards were laid out and designed for PICs before I became involved, and both were selected on the basis of familiarity and chip cost. Both took significantly longer to code than it would have on the AVR. Neither would have been in the volume range where you could recover that software cost over volume.

For hobby projects, I see the AVR as the fastest part to code for.
I don't care even if it's double the pic's cost, since my time is the most valuable thing in the project.

I use my hobby projects as intros to new hardware, when something interesting crosses my desk. That way, I'm into it enough to make an informed decision when it's time to select for real projects.

>Atmel's local reps seem interested however.

Let them slug it out. You always end up the winner :)
Mchip's getting fat and happy, it always happens this way.
Verifone was the new guy once, and kicked GTE, and Mitsubishi's butts in that market. They had 80+% market share for years, got fat and happy, and now IVI and a few others are eating their lunch.

Familiarity is a strong influence. How many times have you seen the basic stamp suggested for projects, even when it would be much less horsepower than required? I've found it hard to make the case to those guys even when I point out the 16 MIPS vs appx 1kips.

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21. [picsig] Re: Atmel vs. PIC

From: David Willmore <davidwillmore@iamanidiot.com>
Date: Sat, 14 Sep 2002 16:31:41 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98607-2002.09.14-16.12.49--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

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> epower than required? I've found it hard to make the case to those guys even when I point out the 16 MIPS vs appx 1kips.

You're completely right in that if the BS can't do the job *at all*, but they can use your own arguement agains you for projects where the task is within the scope of the BS. They're easier for some people to program, so development is easier and the project goes quicker. I think it's safe to say that BASIC is going to be easier for most people to learn than assembly.

I started programming in BASIC. Once I got the hand of things, I wanteded what all of these "CALL" statements were actually doing. So, I went down the rabbit hole and I'm never leaving. :) I program in C some times, but mostly just as a portable assembly language. ;)

So, the rule that we seem to go by is that for hobby projects, development time is more important than implementation costs. So, we have from easiest to hardest (and pretty much most expensive to cheapest):

A full computer
A BASIC Stamp
An Atmel AVR
A Ubicom SX

A Microchip PIC

There is a hidden dimension of 'capability'. It think it's safe to say that
the PC is capable of more than any of the other contenders--except for some
very 'edge' cases. So, this one dimensionality is only an extract of reality--
there is more that is not mentioned. For one, a PC is very hard to fit into
less than a cubic inch and nearly impossible to get to run on less than 1 watt.

How many 3V lithium coin cells does it take to even boot a PC? :)

Cheers,
David N0YMV

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22. [picsig] Re: Atmel vs. PIC

From: "Andrew Rich" <andrew.rich@bigpond.com>
Date: Sun, 15 Sep 2002 07:44:03 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98609-2002.09.14-17.25.16--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I prefer BS2 ...how hard is it to program atmel?

-----Original Message-----
From: bounce-picsig-28143@lists.tapr.org
[mailto:bounce-picsig-28143@lists.tapr.org]On Behalf Of Jeff King
Sent: Sunday, 15 September 2002 05:51
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: Atmel vs. PIC

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MicroChip, the national support is good.

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Jeff King, jeff@aerodata.net on 09/14/2002

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23. [picsig] PIC 16F62x and packet

From: "Mike Berg" <mikeberg@tds.net>
Date: Sun, 15 Sep 2002 14:30:07 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98781-2002.09.15-15.13.27--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The DAC I was refering to is the onboard voltage reference module.
See chapter 11 in the 16F62x spec file.
Vref output can be directed to pin A:2 and should be buffered.
Lets you create the tones with 1 pin vs 4 pins required for a external
R2R ladder. At the periodic interrupt you write the new 4 bit value
to the VRCON register bits 0 thru 3 instead of the PORTA or B
output pins.
73 Mike Berg   N0QBH

>I'd recommend using the on board DAC built in to the PIC 627/8
>instead of a R2R ladder. All you need is a rail to rail op amp
>configured as a voltage follower to buffer the output.
>I used this method along with a Phase Increment Register (PIR)
>routine to transmit parsed GPS data to the USNA APRS satellite

>last winter. It worked FB.
>I still have the assembly code if someone would like to play with it.

>>Nope, but I'm going to try to do a NMEA to APRS converter with a >>16F628
before
>>too long. I wasn't planning on using an MX614 for the audio, just an
>>R2R ladder for a DAC.

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24. [picsig] Re: PIC 16F62x and packet

From: David Willmore <davidwillmore@iamanidiot.com>
Date: Sun, 15 Sep 2002 15:40:10 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98782-2002.09.15-15.21.24--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

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> R2R ladder. At the periodic interrupt you write the new 4 bit value
> to the VRCON register bits 0 thru 3 instead of the PORTA or B
> output pins.
> 73 Mike Berg   N0QBH

Clever. Hmm, that's an awfully cheap way to get a 4 bit output. Which
is especially attractive as the RB has the serial lines *right in the
middle* of the port, so I could only get 5 usable bits from it. I'll
have to look at what the output looks like with only 4 bits of resolution.

Neat solution, but it will cost me an op-amp. Does this same trick work
on the 12F675?

Cheers,
David

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25. [picsig] Re: Atmel vs. PIC

From: Jim White <jim@coloradosatellite.com>
Date: Sun, 15 Sep 2002 18:20:32 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98803-2002.09.15-20.03.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Note: This is not flamebait
>
>Serious question, I've seen the testimonies regarding how much better the
>Atmel is then PIC... seems hands down. Yet the PIC's outsell Atmel.
>
>Any guess as to why this is?

I've read this thread with some interest as I really don't understand why
PIC outsells Atmel either. Perhaps just better marketing?

I started down the PIC road for hobby projects about three years ago but a
friend steered me to Atmel because (according to him) they were much easier
to program. He's a dyed in the wool assembler programmer. He also
suggested you got more horsepower out of an equivalent Atmel part.

I've done some assembler (IBM mainframe assembler was my first language
about 25 years ago) but just don't see the point when C is so much faster
and easier. So I picked up the CodeVision C development environment for
the Atmel line and fell in love. This package has everything including a
wizard that will step you through all of the built in hardware capability
and generate a set of C source you can add your code to. You can do a
Hello World program in about 90 seconds. I've since used it on several
projects including a rotator controller (W6OAL EME array), test units that
emulate other modules in satellites, a chunk of code that does a self test
of all functions - used to do a rad test to death of an 8515, and similar
code that flew in a recent Amateur satellite as a way to prove the part for

operation in space (it's working fine).
Additionally, since I understand the Atmel is designed from the ground up to be efficient when programmed in C, CodeVision C generates object code that is very nearly as efficient as hand written assembler. I'm sure some routines can be improved on in specific situations but for the kind of stuff I do a few more cycles in a routine or a few more bytes of code size just doesn't matter, especially with the chip sizes and speeds available now for $5.

The points made about software development time ring true for me. Whether it's for hobby or a small production run seems like the cost is in getting the software right. Certainly if the software was simple and sales were in the large ten thousands chip cost would sway the argument. Admittedly I'm a software type and have no experience with large production runs. I've also not had to deal with the manufacturer's reps so have no knowledge of their quality.

Seems to me like the BS gets some play in the hobbyist market because lots of folks learned BASIC somewhere along the line and the Stamp is a nice little self contained package. If someone took a PIC or Atmel part and made a similar board with BASIC built in I suspect it would sell as well. It's not the chip it's the built in language and packaging.

For my purposes speed of development is the key and nothing beats C in a full-up IDE and ICE for that. If there was a CodeVision C clone for PIC I might have stuck with Microchip.

Incidentally there is now a real time kernal available that integrates with CodeVision C for the Atmel Mega parts.

Jim
wd0e@amsat.org
jim@coloradosatellite.com

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26. [picsig] Re: Atmel vs. PIC

From: David VanHorn <dvanhorn@cedar.net>
Date: Sun, 15 Sep 2002 19:47:58 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-98805-2002.09.15-20.28.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

While the list is called out as a PIC group, I hope that it's really intended as a microcontroller group, and not just as a PIC group.
There's more than one way to build a Schroedinger's cat box!

>I've since used it on several projects including a rotator controller (W6OAL EME array), test units that emulate other modules in satellites, a chunk of code that does a self test of all functions - used to do a rad test to death of an 8515, and similar code that flew in a recent Amateur satellite as a way to prove the part for operation in space (it's working fine).

You have me curious.
I would think that C would be a bad thing for space ops, given that you don't know exactly what the compiler did to build the app. At least not without extensive exploration. With assembler, you know exactly what's happening at every point. I'm not a C programmer, though that will change soon. C's default behaviour of pushing all the data onto the stack seems redundant in the first place, and dangerous in the second.

>Additionally, since I understand the Atmel is designed from the ground up to be efficient when programmed in C, CodeVision C generates object code that is very nearly as efficient as hand written assembler.

Well.. I don't know that I'd agree with that.
They did design the part with C in mind though.

I've done apps that push the chips in ways that C won't let you.
For example, overlaying stack space with a data buffer.
Perfectly safe, since I know exactly how much stack space I'll need at any given point. It's like juggling knives, as long as you pay attention to where the handles are, you're fine :)

No contest though, If I had to do higher order math or big string manipulations, I'd want to do them in C.

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27. [picsig] Re: [aprssig] KPS-3/ GE Phoenix assistance??

From: Steve Slay <snslay@swbell.net>
Date: Sun, 15 Sep 2002 21:12:45 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: picsig@lists.tapr.org
Message-ID: <LYR6890-98825-2002.09.15-21.54.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If it's a KPC3+ you can download a manual at;

http://www.kantronics.com/downloads.htm

Manuals (PDF format):

KAM '98 Users Guide (1,095KB)
KAM XL Users Guide (1,111KB)
KPC-3+ Users Guide (973KB)
KPC-9612+ Users Guide (1,003KB)

Steve Slay
KC5MVY
Where am I now? http://www.findu.com/cgi-bin/find.cgi?call=KC5MVY
Where have I been lately? http://www.findu.com/cgi-bin/track.cgi?call=KC5MVY
With weather RADAR http://www.findu.com/cgi-bin/find.cgi?call=KC5MVY&radar=LBB

"Only two things are infinite, the universe and human stupidity, and I'm not sure about the former."
Albert Einstein

> ----- Original Message -----
> From: larry Also
> To: TAPR APRS Special Interest Group
> Cc: picsig@lists.tapr.org
> Sent: Sunday, September 15, 2002 6:59 PM
> Subject: [aprssig] KPS-3/ GE Phoenix assistance??
>
> Bob, et al,
>
> I have acquired the use of a couple Kantronics KPS-3 TNC's with the APRS chip, however, though I have the DOC, I am missing the suplemental DOC for the APRS, can anyone help me with setting these up?
>
> Attached to these are a couple of GE Phoenix SX Xcvrs with NO DOC and no programming info. THese are currently on a public service freq that I am authorised to use, but I would like to reprogram at least one channel to the HAM freq for higher traffic as I learn the ropes. Again, can anyone help on this??
>
> Might be better to reply off list as I suspect this is old hat to most of you. Please use Larrytoo@yahoo.com for this,
>
> Thanks
>
> Larry
>
> N3HLL

> Do You Yahoo!?
> Yahoo! Finance - Get real-time stock quotes

28. [picsig] Re: [aprssig] KPS-3/ GE Phoenix assistance??

From: Steve Slay <snslay@swbell.net>
Date: Sun, 15 Sep 2002 21:16:51 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: picsig@lists.tapr.org

Message-ID: <LYR6890-98827-2002.09.15-21.58.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If it's a KPC3+ you can download a manual at;
http://www.kantronics.com/downloads.htm

Steve Slay
KC5MVY
Where am I now? http://www.findu.com/cgi-bin/find.cgi?call=KC5MVY
Where have I been lately?
http://www.findu.com/cgi-bin/track.cgi?call=KC5MVY
With weather RADAR
http://www.findu.com/cgi-bin/find.cgi?call=KC5MVY&radar=LBB

"Only two things are infinite, the universe and human stupidity, and I'm not
sure about the former."   Albert Einstein

----- Original Message -----
From: larry Also
To: TAPR APRS Special Interest Group
Cc: picsig@lists.tapr.org
Sent: Sunday, September 15, 2002 6:59 PM
Subject: [aprssig] KPS-3/ GE Phoenix assistance??

Bob, et al,

  I have acquired the use of a couple Kantronics KPS-3 TNC's with the APRS
chip, however, though I have the DOC, I am missing the suplemental DOC for
the APRS, can anyone help me with setting these up?

Attached to these are a couple of GE Phoenix SX Xcvrs with NO DOC and no
programming info. THese are currently on a public service freq that I am
authorised to use, but I would like to reprogram at least one channel to
the HAM freq for higher traffic as I learn the ropes. Again, can anyone
help on this??
Might be better to reply off list as I suspect this is old hat to most of
you. Please use Larrytoo@yahoo.com for this,

Thanks

Larry
N3HLL

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29. [picsig] Lost packets from PICe clone

From: Zack Clobes <zclobes@swbell.net>
Date: Tue, 17 Sep 2002 15:12:48 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99109-2002.09.17-15.52.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have a 1200 baud modem, based around the PICe architecture. I'm using a 16F876/20MHz to drive it, but
 similar configuration otherwise. The AX.25 routines I'm using were basically the same that John Hansen
 developed for the TAPR project. For some reason though, my controller is losing packets.

In a closed environment (free from all outside QRM), I'm losing as much as 25%-30% of my packets being
transmitted by a VX-1R. The weird part is that the loss is only on certain (most) radios. I'm using a
brand new FT-2600 with a KPC-3 as the receiving end and getting the loss. If I switch the radio over to
 an old FT-2700 dual bander, I get pretty darn close to 100% copy. I have tried various other
radios/TNC combinations with it including scanners, HT's, another 2600, KPC-3+, FT-847, etc. They all
lose some packets. However, they won't all lose the SAME packets - it's totally random for each
receiver/TNC combo.

Receiving data from any other TNC/Transmitter seems to be fine on all systems.

I've tried everything that I can think of including:

- Tweaking the delay_us value - I've spent hours going through each value
- Buffering the audio output
- Changing the audio level (both attenuation and gain)
- Changing the coupling capacitor (.001 through about 47uF)

I (and my wife) would appreciate any help that can be given. I'm nearly out of ideas... except for that sledge hammer in the garage.

I have a full construction article on my website where you can get more specifics on the setup as well as the exact code that I'm using. http://www.rckara.org/tech_exchange/projects/aprs_board/

Thanks,
Zack Clobes, W0ZC
Project: Traveler
www.rckara.org/

30. [picsig] Re: Lost packets from PICe clone

From: David VanHorn <dvanhorn@cedar.net>
Date: Tue, 17 Sep 2002 15:26:17 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99115-2002.09.17-16.07.59--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>I've tried everything that I can think of including:
>- Tweaking the delay_us value - I've spent hours going through each value
>- Buffering the audio output
>- Changing the audio level (both attenuation and gain)
>- Changing the coupling capacitor (.001 through about 47uF)

Have you looked for excessive twist in your audio?
Modems generally want the high tone at or lower than the level of the low tone. This can be hard to see without a spectrum analyzer. Different TNCs will have different twist values in their hardware, and your hardware adds it's own.

Can you define a little clearer what's happening?

Is there any sensitivity to byte patterns?

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31. [picsig] Re: Lost packets from PICe clone

From: David VanHorn <dvanhorn@cedar.net>
Date: Tue, 17 Sep 2002 15:39:52 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99120-2002.09.17-16.21.15--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Couple more notes:

I see you have bypasing on the MX-614 supply, but these chips are VERY sensitive to power noise. Adding a small resistor between the supply, and the chip and it's bypass cap, may work wonders. I've always used a 10 ohm/0.1uF combination with switched cap modems.

Is the resonator sufficiently accurate for this?
If it's off far enough, you'll suffer greatly.

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32. [picsig] Re: Lost packets from PICe clone

From: James Jefferson <jjeffers@aprsworld.net>
Date: Tue, 17 Sep 2002 17:14:15 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99133-2002.09.17-17.54.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Zack,

I don't have my notes in front of me. But I think you'll probably fix your problem by adding two 0x7e's at the end of the packet:

```
void sendPacketEnd(void) {
//This function closes out the packet with check-sums and unkeys the
transmitter
        //send the crc checksum
        crcflag = TRUE;
        crclo =crclo^0xff;
        crchi = crchi^0xff;
        sendByte(crclo); //send the low byte of crc
        sendByte(crchi); //send the high byte of crc

        flag = TRUE;
        sendByte(0x7e);                  // Send a flag to end packet

>>>     add another sendByte(0x7e) here

        output_low(OUT_DIG_TNC_PTT);     //unkey PTT

        //set the status lines back to non-transmit mode
        output_low(OUT_DIG_TNC_DATA_TX); // set the transmit data line to low
        output_low(OUT_DIG_TNC_M0);   //put 614 back in receive mode
        output_high(OUT_DIG_TNC_M1);
}


Otherwise try setting your DCD to "INTERNAL" instead of "SOFTWARE" on the
KPC-3 and see if that effects anything.

-Jim KB0THN



---
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```

33. [picsig] Re: Lost packets from PICe clone

From: John Hansen <hansen@fredonia.edu>
Date: Tue, 17 Sep 2002 18:13:32 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99134-2002.09.17-17.58.18--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/html

I'm not sure I have an answer to your question, since I didn't run into this problem while doing the PICe development. One thing I would definitely try is using a TNC other than the Kantronics. Kantronics generally idles with 00's, not flags, and if the code works with other TNC's, you might try changing most of the 7F's in your source to 00's (you must leave at least one flag before the packet, however). I doubt that this is the answer, though, or we would have seen the problem early on with the PIC-E. I wonder if there isn't some RF interference being produced that is causing this... have you tried running the audio output of your unit directly into the audio input of the Kantronics unit without using a radio. Do you get any dropped packets then?

Actually, I'm writing with another suggestion. Your docs say you can't distribute the HEX file because the callsign has to be hard-coded. Actually there is a way to do this without you're having to recompile the code for everyone. Store the callsign data in an assembly language look up table (using the RETLW instructions). For example:

```
int lookup(int letter){

#ASM

        movf
letter,w

        call look

        goto end

look:   addwf   2,f

        retlw
0xAE    //location 00
```

```
        retlw
0x64

        retlw
0x8C

        retlw
0xA6

        retlw
0x40

        retlw
0x40

        retlw
0x69

end:    movwf  _RETURN_

#ENDASM

}
```

Then, if you make a call to this table the first thing in
main:

```
int foo = lookup(0);
```

the table will be placed in the exact same predictable and easy to find
location in the .HEX file every time... even if you later alter and
recompile the code. Then users can edit their own .HEX files with
any binary editor... or you can put out a simple command line or windows
program that will read in the file, make the necessary changes based on a
user supplied callsign and read it out again. This is basically
what the GUI program that does the configuration for GPS2E does.

Best of luck with your project.

John W2FS

At 03:12 PM 9/17/2002 -0500, you wrote:

I have a 1200 baud
modem, based around the PICe architecture. I'm using a 16F876/20MHz
to drive it, but similar configuration otherwise. The AX.25
routines I'm using were basically the same that John Hansen developed for
the TAPR project. For some reason though, my controller is losing
packets.

In a closed environment (free from all outside
QRM), I'm losing as much as 25%-30% of my packets being transmitted by a
VX-1R. The weird part is that the loss is only on certain (most)
radios. I'm using a brand new FT-2600 with a KPC-3 as the receiving
end and getting the loss. If I switch the radio over to an old
FT-2700 dual bander, I get pretty darn close to 100% copy. I have
tried various other radios/TNC combinations with it including scanners,
HT's, another 2600, KPC-3+, FT-847, etc. They all lose some
packets. However, they won't all lose the SAME packets - it's
totally random for each receiver/TNC combo.

Receiving data from any other TNC/Transmitter
seems to be fine on all systems.

I've tried everything that I can think of
including:

- Tweaking the delay_us value - I've spent
hours going through each value

- Buffering the audio output

- Changing the audio level (both attenuation
and gain)

- Changing the coupling capacitor (.001 through
about 47uF)

I (and my wife) would appreciate any help that
can be given. I'm nearly out of ideas... except for that sledge
hammer in the garage.

I have a full construction article on my
website where you can get more specifics on the setup as well as the
exact code that I'm using.
http://www.rckara.org/tech_exchange/projects/aprs_board/
<http://www.rckara.org/tech_exchange/projects/aprs_board/>

Thanks,

Zack Clobes, W0ZC

Project: Traveler

www.rckara.org/ <http://www.rckara.org/>

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34. [picsig] Re: Lost packets from PICe clone

From: James Jefferson <jjeffers@aprsworld.net>
Date: Tue, 17 Sep 2002 17:19:56 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99137-2002.09.17-18.00.19--lyris.picsig#tapr.org@lists.tapr.org>
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Or put the callsign and path in the EEPROM. Most programming software will let
the use fiddle with the EEPROM. That's what I do.

-Jim

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35. [picsig] Re: Lost packets from PICe clone

From: David VanHorn <dvanhorn@cedar.net>
Date: Tue, 17 Sep 2002 17:18:47 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99138-2002.09.17-18.00.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 05:14 PM 9/17/2002 -0500, James Jefferson wrote:
>Zack,
>
>I don't have my notes in front of me. But I think you'll probably fix your
>problem by adding two 0x7e's at the end of the packet:

Sorry, I misread that, I thought the problems were on the receiving side.

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36. [picsig] Re: Lost packets from PICe clone

From: Mark Cheavens <mcheavens@usa.net>
Date: Wed, 18 Sep 2002 09:26:18 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99261-2002.09.18-10.06.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As has been stated before I would suggest you look at the audio twist. The
easiest way to do this is to set your code to transmit the high and low
tones independently for testing. There should be a 1db per octave change.
Since the two tones we use are 1200 and 2200 it is very near one octave.
So, using a service monitor the transmit audio levels should be (no need to
start a war on this subject) 3.2 Khz deviation on 2200 and 2.1Khz for 1200.

In the 1200 baud world (AFSK) typically the audio leaving the TNC should be
flat with that audio going into the MIC circuit on the radio. Assuming the
radio has the proper pre-emphasis circuit then the transmitted signal will
have the proper pre-emphasis (twist).

On the receiver side we then must use the SPEAKER audio (NOT discriminator)
so that we use the de-emphasis circuit in the radio so that the audio going
to the TNC is then flat again.

NOTE: MOST TNC's can handle some twist if the high tone is higher than the
low tone, BUT they can handle almost NO twist in the other direction (low
tone higher than the high tone).

I have seen many problems from people injecting or removing audio from the
incorrect location in a radio causing your same symptoms. VERY common when
people use the "data" port on a radio (this is for 9600 baud ONLY!).

In the 9600 world (FSK) the audio is flat throughout.....(different
subject entirely)

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37. [picsig] Re: Lost packets from PICe clone

From: "HSHK" <hshk@ix.netcom.com>
Date: Wed, 18 Sep 2002 10:30:45 -0400 (Eastern Daylight Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99263-2002.09.18-10.12.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Though the questions posed was not mine, I found your
answer most informative.

Thanks,

Bill KA8VIT

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Wednesday, September 18, 2002 10:25:52
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: Lost packets from PICe clone

As has been stated before I would suggest you look at the audio twist. The
easiest way to do this is to set your code to transmit the high and low
tones independently for testing. There should be a 1db per octave change.
Since the two tones we use are 1200 and 2200 it is very near one octave.
So, using a service monitor the transmit audio levels should be (no need to
start a war on this subject) 3.2 Khz deviation on 2200 and 2.1Khz for 1200.

In the 1200 baud world (AFSK) typically the audio leaving the TNC should be
flat with that audio going into the MIC circuit on the radio. Assuming the
radio has the proper pre-emphasis circuit then the transmitted signal will
have the proper pre-emphasis (twist).

On the receiver side we then must use the SPEAKER audio (NOT discriminator)
so that we use the de-emphasis circuit in the radio so that the audio going
to the TNC is then flat again.

NOTE: MOST TNC's can handle some twist if the high tone is higher than the
low tone, BUT they can handle almost NO twist in the other direction (low
tone higher than the high tone).

I have seen many problems from people injecting or removing audio from the
incorrect location in a radio causing your same symptoms. VERY common when
people use the "data" port on a radio (this is for 9600 baud ONLY!).

In the 9600 world (FSK) the audio is flat throughout.....(different

subject entirely)

You are currently subscribed to picsig as: hshk@ix.netcom.com
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.

38. [picsig] Re: Lost packets from PICe clone

From: "Marcelo Puhl" <mark@cpovo.net>
Date: Wed, 18 Sep 2002 14:55:43 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99283-2002.09.18-13.36.34--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 18 Sep 2002 at 9:26, Mark Cheavens wrote:

> As has been stated before I would suggest you look at the audio twist. The
> easiest way to do this is to set your code to transmit the high and low
> tones independently for testing. There should be a 1db per octave change.
> Since the two tones we use are 1200 and 2200 it is very near one octave.
> So, using a service monitor the transmit audio levels should be (no need to
> start a war on this subject) 3.2 Khz deviation on 2200 and 2.1Khz for 1200.
>

I have seen several modem designs neglecting the IC output impedance.
The MX614 datasheet shows the audio output connected to a 100 kOhm resistor.
Lowering that resistor increases the audio twist. The same happens on the
TCM3105.

Marcelo Puhl
http://py3ss.cjb.net

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39. [picsig] Re: Lost packets from PICe clone

From: David VanHorn <dvanhorn@cedar.net>
Date: Wed, 18 Sep 2002 12:59:34 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99285-2002.09.18-13.40.45--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>I have seen several modem designs neglecting the IC output impedance.
>The MX614 datasheet shows the audio output connected to a 100 kOhm resistor.
>Lowering that resistor increases the audio twist. The same happens on the
>TCM3105.

Their output is very wimpy, and not really meant to drive anything except an op-amp buffer.

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40. [picsig] Re: Lost packets from PICe clone

From: Bill Vodall - WA7NWP <wa7nwp@yahoo.com>
Date: Wed, 18 Sep 2002 11:12:18 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99287-2002.09.18-13.53.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 09:26 AM 9/18/02 -0500, Mark Cheavens wrote:

>In the 1200 baud world (AFSK) typically the audio leaving the TNC should be flat with that audio going
into the MIC circuit on the radio. Assuming the radio has the proper pre-emphasis circuit then the
transmitted signal will have the proper pre-emphasis (twist).
>
>On the receiver side we then must use the SPEAKER audio (NOT discriminator) so that we use the
de-emphasis circuit in the radio so that the audio going to the TNC is then flat again.

>
>I have seen many problems from people injecting or removing audio from the incorrect location in a radio causing your same symptoms. VERY common when people use the "data" port on a radio (this is for 9600 baud ONLY!).

If the lost packets are being received on a D700 this may be the issue as it uses flat discriminator signals for 1200 baud AFSK...

Bill, WA7NWP

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

41. [picsig] Re: Lost packets from PICe clone

From: "Zack Clobes" <zclobes@swbell.net>
Date: Wed, 18 Sep 2002 17:25:7
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99335-2002.09.18-18.06.37--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Well, I appreciate everyone's help so far. I spent my lunch hour trying out just about all of your suggestions. I:
- decoupled with a 10ohm resistor
- added an extra 1uF tantilum for extra good measure
- added the 7E byte to the end
- RF shielded the board (put ferrite chokes on the radio input, repositioned the dummy load/transmitter (VX-1R on low power), switched to NiMH battery pack, and placed the board and battery inside of a foil-covered box
- tested the oscilator frequency

I had some problems testing the oscilator's frequency because it doesn't have enough drive to trip any of my counters. So instead, I pulled the oscilator and coupled my signal generator in and locked it to 3.59MHz. No change. BUT....

Out of couriosity, I started tuning away from 3.58MHz and I could gradually get a slight change in pitch from the transmitted audio. I would up at 3.682MHz (yes, 100kHz up, and I confirmed that with an independant HF receiver) and I have now received nearly 300 packets in a row! WHAT GIVES?

The suggestion on the audio twist (sorry, I'm not familiar with the term) seems to have the most merrit at this time. I don't have access to a spectrum analyzer so I really can't see it with that method.

I have noticed on the scope that one of the frequencies was slightly weaker than the other coming out of the '614. When I put the audio buffering on (TL082), the difference went away. Since then, I have pulled that buffer back out of the circuit and am now driving the transmitter directly from the '614.

Any other ideas? What are my other options for measuring this twist?

Zack Clobes, W0ZC
Project: Traveler

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

42. [picsig] Re: Lost packets from PICe clone

From: James Jefferson <jjeffers@aprsworld.net>
Date: Wed, 18 Sep 2002 17:32:02 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99349-2002.09.18-18.12.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Out of couriosity, I started tuning away from 3.58MHz and I could gradually
> get a slight change in pitch from the transmitted audio. I would up at
> 3.682MHz (yes, 100kHz up, and I confirmed that with an independant HF
> receiver) and I have now received nearly 300 packets in a row! WHAT
> GIVES?

MX-Comm's datasheet for the MX614 is very specific about the oscillator

specifications. For example, TAPR's PIC-E is out of spec by not using a
crystal resonator. Perhaps take a second look at their specifications.

-Jim KB0THN

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

43. [picsig] Re: Lost packets from PICe clone

From: David VanHorn <dvanhorn@cedar.net>
Date: Wed, 18 Sep 2002 17:36:18 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99350-2002.09.18-18.17.26--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>I had some problems testing the oscilator's frequency because it doesn't
>have enough drive to trip any of my counters. So instead, I pulled the
>oscilator and coupled my signal generator in and locked it to 3.59MHz. No
>change. BUT....

What, no HF receiver with BFO?
Tune to the right freq, and you should get 400-800 hz.
Verify against WWV.
Your osc should radiate weakly on the fundamental, and all the even/off harmoinics depending on how
sine-ish it is.

>Out of couriosity, I started tuning away from 3.58MHz and I could gradually get a slight change in
pitch from the transmitted audio. I would up at 3.682MHz (yes, 100kHz up, and I confirmed that with an
independant HF receiver) and I have now received nearly 300 packets in a row! WHAT GIVES?

Sounds like you're twisted, sister!

>The suggestion on the audio twist (sorry, I'm not familiar with the term) seems to have the most merrit
 at this time. I don't have access to a spectrum analyzer so I really can't see it with that method.

The term comes from telco. Picture a couple miles of wire.
You start with the high tone hot by say 3db. As you go down the wire, you'll see the high tone drop
lower and lower, relative to the low tone. So, it looks like a twist.

>I have noticed on the scope that one of the frequencies was slightly weaker than the other coming out
of the '614. When I put the audio buffering on (TL082), the difference went away.

That was probably a good thing.

>Since then, I have pulled that buffer back out of the circuit and am now driving the transmitter
directly from the '614.

You really should have the buffer.

>Any other ideas? What are my other options for measuring this twist?

DVM but it's tedious.
Put the buffer back, set up the low tone, measure the output, AC coupled, hopefully your meter has a dB
scale? If not ac volts. Then set up the high tone, and see who is bigger, and by how much.

Me, I bring it into my 7L5 and hit a couple buttons :)

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44. [picsig] Re: Lost packets from PICe clone

From: Mark Cheavens <mcheavens@usa.net>
Date: Thu, 19 Sep 2002 07:19:43 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99477-2002.09.19-08.00.19--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Since you say you have a scope I would:
1. Make your code send each tone individually (test mode).
2. Measure the level AND frequency leaving your board going to the radio.
The Frequency should be very close and the levels should be the same.
3. Using a receiver (speaker output) check the levels again and make sure

they are flat there. (this assumes that the de-emphasis network is correct
in the receiver.

Mark
KC5EVE

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45. [picsig] Re: Atmel vs. PIC

From: Jim White <jim@coloradosatellite.com>
Date: Sun, 22 Sep 2002 08:18:41 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99904-2002.09.22-10.02.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:47 PM 09/15/2002 -0500, David VanHorn wrote:
>While the list is called out as a PIC group, I hope that it's really
>intended as a microcontroller group, and not just as a PIC group.
>There's more than one way to build a Schroedinger's cat box!
>
>
> >I've since used it on several projects including a rotator controller
> (W6OAL EME array), test units that emulate other modules in satellites, a
> chunk of code that does a self test of all functions - used to do a rad
> test to death of an 8515, and similar code that flew in a recent Amateur
> satellite as a way to prove the part for operation in space (it's working
> fine).
>
>You have me curious.
>I would think that C would be a bad thing for space ops, given that you
>don't know exactly what the compiler did to build the app. At least not
>without extensive exploration. With assembler, you know exactly what's
>happening at every point. I'm not a C programmer, though that will change
>soon. C's default behaviour of pushing all the data onto the stack seems
>redundant in the first place, and dangerous in the second.

Space software absolutely MUST work right. But if you don't trust a
compiler I'd suggest you have lost before you began. Software for space
gets tested (hopefully) more thoroughly as part of the development and
integration process. That's one of the reasons doing satellites is
expensive, though not the main reason. Developing code for satellites,
large and small, is often suffers from the same problems as development for
other uses. The hardware doesn't perform like it was spec'd, the hardware
guys get the first CPUs to the software guys late, and the schedule gets
changed by the marketing people. So it's important to be able to develop
on off the shelf boards then move the code to the special stuff. AMSAT
pioneered that idea in the late 80's by developing on IBM ARTIC cards in
PCs and flying the NEC V40 (286-like) chip as the main CPU in a set of 4
satellites. We also pioneered fully uploadable software, another practice
that has caught on. However for deep space missions the designs are still
one of a kind processors and all code in ROM.

> >Additionally, since I understand the Atmel is designed from the ground
> up to be efficient when programmed in C, CodeVision C generates object
> code that is very nearly as efficient as hand written assembler.
>
>Well.. I don't know that I'd agree with that.
>They did design the part with C in mind though.

You are probably much more versed in that than I am. I have observed the
discussions (well, wars) on some of the Atmel reflectors about which C
compiler produces the most efficient code. Often the discussion ends when
someone points out the differences between compilers and between their
output and hand written assembler is so small as to have no effect on the
project.

>I've done apps that push the chips in ways that C won't let you.
>For example, overlaying stack space with a data buffer.
>Perfectly safe, since I know exactly how much stack space I'll need at any
>given point. It's like juggling knives, as long as you pay attention to
>where the handles are, you're fine :)

No question a good assembler programmer can wring more out of a chip and
use memory more efficiently. But your example reminded of my first big

program in IBM OS360 assembler for a 360-158 umpteen years ago. I wrote
what amounted to a specialized spread sheet for merging budget information
from several business units. I did all sorts of tricks with reuse of
registers and core and ended up with a really cool and fast program. My
supervisor was not impressed because a) the program ran in a few seconds
when a few minutes would have been fine and b) it was unmaintainable by
anyone be me.
Not that that's always the case with assembler vs. C. I've seen C programs
it would take days to decipher and very well documented assembler that did
cool stuff (the boot loader we put in ROM in our satellites comes to
mind). But what I'm suggesting is : Given the speed and memory available
in todays embedded chips a bit less efficient C code makes no difference in
the performance of the product but makes a big difference in speed of
development and ease of maintenance. That translates directly into cost
unless of course it pushes the product to a more much more expensive chip.

I'd further suggest that the lack of a cheap BASIC or C IDE for PIC chips
has hurt their hobbyist market. The first ATPR/ARRL Digital Conference I
went to was full of interesting presentations on neat stuff being done on
PICs. But it was all in assembler. It's been my experience that Joe
Citizen is less likely to jump into programming if they have to do it in
assembler vs. BASIC or perhaps C. Most everyone who had some science in
high school or took computer classes in college has been exposed to one of
those languages. Not so with assembler.

So, back to the original subject, I'd suggest the two very capable and easy
to use C language IDEs for the Atmel, combined with it's more efficient use
of C object code and the easier, faster and cheaper development that
results, makes the Atmel chips more desirable for most projects.
Further I suspect MC maintains it's sales lead in the market only because
it was there first and captured a large share.

VHS and BetaMax come to mind.

Jim

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46. [picsig] Re: Lost packets from PICe clone

From: Zack Clobes <zclobes@swbell.net>
Date: Sun, 22 Sep 2002 10:06:57 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99907-2002.09.22-10.45.50--lyris.picsig#tapr.org@lists.tapr.org>
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I'm just getting back on this, but here's what I've found so far. Both
tones are on frequency coming out of the MX614, however the low tone is very
impure. Listening to them separately, you can hear a jagged-ness to it and
the scope shows a slightly out-of-kilter waveform with some noise on it.
The high tone is very pure and looks good on the scope. There doesn't
appear to be any extra noise on the power supply line going into the 614.

Also, the high tone is about 120mV stronger than the low tone no matter what
the load is.

I haven't had a chance to measure the output from the receiver yet, but will
try to get to it tonight.

Any other ideas?

Zack Clobes, W0ZC
Project: Traveler
www.rckara.org/

----- Original Message -----
From: "Mark Cheavens" <mcheavens@usa.net>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Thursday, September 19, 2002 7:19 AM
Subject: [picsig] Re: Lost packets from PICe clone

> Since you say you have a scope I would:
> 1. Make your code send each tone individually (test mode).
> 2. Measure the level AND frequency leaving your board going to the radio.
> The Frequency should be very close and the levels should be the same.

> 3. Using a receiver (speaker output) check the levels again and make sure
> they are flat there. (this assumes that the de-emphasis network is correct
> in the receiver.
>
> Mark
> KC5EVE
>
>
> ---
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>

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47. [picsig] Re: Atmel vs. PIC

From: Jeff King <jeff@aerodata.net>
Date: Sun, 22 Sep 2002 11:49:14 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99922-2002.09.22-11.26.19--lyris.picsig#tapr.org@lists.tapr.org>
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On Sun, 22 Sep 2002 08:18:41 -0600, Jim White wrote:

>I'd further suggest that the lack of a cheap BASIC or C IDE for PIC
>chips has hurt their hobbyist market.

For quite some time there have been free/lowcost C compiler's for the PIC.
There are also low cost basic compiler's and possibly even free one's as
well. And the hobbyist market for the PIC is still much bigger then Atmel,
although it could be larger as you suggest.

>The first ATPR/ARRL Digital Conference I
>went to was full of interesting presentations on neat stuff being
>done on PICs. But it was all in assembler.

If your talking about the one they introduced the PIC-E at (I think 1998)
John Hansen's and Steve Dimse's contribution was done in CCS 'C'. I know
John's code has been referenced a number of times in further PIC projects, so
there is a active "PIC C" amateur radio following.

>It's been my experience that Joe
>Citizen is less likely to jump into programming if they have to do
>it in assembler vs. BASIC or perhaps C.

True. I started with the Basic Stamp and when it wouldn't do what I want, I
went to a C compiler. If a Basic compiler has existed then, I very well may
have gone to that. I had a job to do and the language was simply a means to
get the job done...not a religion to me.

>Most everyone who had some science in
>high school or took computer classes in college has been exposed to
>one of those languages. Not so with assembler.

My argument here is that 'C' is much more marketable in today's market then
assembly. While there is no doubt that assembly has it's place for optimized
sub routines, almost every company I have worked with in the last few years
is doing their embedded development in C or C++. Those few still doing
assembly are making an active effort to transition to 'C'. The argument of "C
vs. Assembly" has become so irrelevant in the real business world that I
compare those advocating pure assembly as those still advocating the CW
requirement in amateur radio. I.E. One certainly is entitled to their opinion
but the rest of the world has already moved on.

-Jeff

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48. [picsig] Re: Atmel vs. PIC

From: David VanHorn <dvanhorn@cedar.net>
Date: Sun, 22 Sep 2002 11:10:47 -0500

To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99924-2002.09.22-11.52.01--lyris.picsig#tapr.org@lists.tapr.org>
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>
>You are probably much more versed in that than I am. I have observed the discussions (well, wars) on some of the Atmel reflectors about which C compiler produces the most efficient code. Often the discussion ends when someone points out the differences between compilers and between their output and hand written assembler is so small as to have no effect on the project.

Not a very interesting project then. :)
What I've seen, between C and ASM, has been large speed/size differences, even when written by the same person.

>I'd further suggest that the lack of a cheap BASIC or C IDE for PIC chips has hurt their hobbyist market. The first ATPR/ARRL Digital Conference I went to was full of interesting presentations on neat stuff being done on PICs. But it was all in assembler. It's been my experience that Joe Citizen is less likely to jump into programming if they have to do it in assembler vs. BASIC or perhaps C. Most everyone who had some science in high school or took computer classes in college has been exposed to one of those languages. Not so with assembler.

People do tend to stick to what they've already done.

>So, back to the original subject, I'd suggest the two very capable and easy to use C language IDEs for the Atmel, combined with it's more efficient use of C object code and the easier, faster and cheaper development that results, makes the Atmel chips more desirable for most projects.
>Further I suspect MC maintains it's sales lead in the market only because it was there first and captured a large share.
>
>VHS and BetaMax come to mind.

I hear ya.

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49. [picsig] Re: Atmel vs. PIC

From: David VanHorn <dvanhorn@cedar.net>
Date: Sun, 22 Sep 2002 11:36:54 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99933-2002.09.22-12.18.02--lyris.picsig#tapr.org@lists.tapr.org>
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We did kind of veer from my original question, so let me go back there.

It's my understanding, and maybe I'm wrong, that when you compile an app in C, you get one set of code, which is of course machine generated assembler. You have every reason to believe that this code accurately represents the C source, but I know there are times when it does not. Still, that's testable, to some degree.

Now you make a change to the C code, and re-compile.

AFAIK, the compiler may make code that is now significantly different, and not just by adding the new function. For example, it might change the way it built some other function, to share code with the new change, or in some other way, introduce more changes than you would have had, if you "just" inserted that function in human-written assembler.

In the assembler case, you know absolutely, that the only change is the lines of code that you added.
In the C case, if I understand it correctly, the change may be less well defined.

On the other track:

At the level of blinking an LED or some other trivial app, I'm a complete believer that you can do it as well in C, as in any other language. As the demand for performance rises though, there is a zone of overlap, but in the end, the only tool that will get you there is assembler. I tend to hang out in that neighborhood.

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50. [picsig] Re: Atmel vs. PIC

From: Jeff King <jeff@aerodata.net>
Date: Sun, 22 Sep 2002 15:06:43 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99950-2002.09.22-14.43.42--lyris.picsig#tapr.org@lists.tapr.org>
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On Sun, 22 Sep 2002 11:36:54 -0500, David VanHorn wrote:
>
>We did kind of veer from my original question, so let me go back
>there.

I never saw a question, or more precisely, the "question" you asked I considered rhetorical. That is, what consistently produces smaller object code, a seasoned experienced assembly programmer or a plurality of C compilers. But if you learn your C compiler and understand it, then often the difference is not much. And the amount of time you save with a C compiler far overrides this, in particular in the hobbyist case.

>In the assembler case, you know absolutely, that the only change is
>the lines of code that you added. In the C case, if I understand it
>correctly, the change may be less well defined.

To the assembly programmer that may be the case, however the C compiler does it for a reason. Been through this already, and while in some cases it has to do with a FUBAR C compiler, often it is things that are not considered, such as default conditions or "safe conditions" that the micro manf defines.

>At the level of blinking an LED or some other trivial app, I'm a
>complete believer that you can do it as well in C, as in any other
>language. As the demand for performance rises though, there is a
>zone of overlap, but in the end, the only tool that will get you
>there is assembler. I tend to hang out in that neighborhood.

Totally disagree here, especially when the metric 'performance' also includes getting a product to market. But I bowed out of the CW or die wars years ago (check usenet/google on that one). If it works for you great, it is the best tool. However, understand the world is moving on.

Frankly, having been involved in the hiring process, I'd rather hire a C programmer who was light on assembly before a assembly programmer who was light on C. C, to some degree, transcends processors where as assembly is often processor specific. I'd rather have people who can be objective when it comes to what processor they work with (so I can minimize costs). C allows this. It is all about money and almost every major automotive manufacturer is mandating C in there automotive products (where as years ago assembly was king).

-Jeff

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51. [picsig] Re: Atmel vs. PIC

From: Timothy J Salo <tjs@tc.umn.edu>
Date: Sun, 22 Sep 2002 14:16:23 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99952-2002.09.22-14.57.54--lyris.picsig#tapr.org@lists.tapr.org>
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> To: picsig@lists.tapr.org
> Subject: Re: [picsig] Re: Atmel vs. PIC
>
> Date: Sun, 22 Sep 2002 11:36:54 -0500
> From: David VanHorn <dvanhorn@cedar.net>
> Subject: [picsig] Re: Atmel vs. PIC
>   [...]
> It's my understanding, and maybe I'm wrong, that when you compile an app
> in C, you get one set of code, which is of course machine generated
> assembler. You have every reason to believe that this code accurately
> represents the C source, but I know there are times when it does not.
> Still, that's testable, to some degree.

True, but in the broad scheme of things C compilers are responsible for a very, very small number of the errors that occur in software

development.

> Now you make a change to the C code, and re-compile.
>
> AFAIK, the compiler may make code that is now significantly different,
> and not just by adding the new function. For example, it might change
> the way it built some other function, to share code with the new
> change, or in some other way, introduce more changes than you would
> have had, if you "just" inserted that function in human-written assembler.
>
> In the assembler case, you know absolutely, that the only change is the
> lines of code that you added. In the C case, if I understand it
> correctly, the change may be less well defined.

These circumstances may occur with highly optimizing compilers, highly optimizable languages, software that is highly optimizable, and hardware architectures that permit a broader range of optimizations. While I haven't examined the code generated by available PIC compilers, I suspect that none of these is true in a PIC environment.

o I don't think that any of the C compilers for the PIC qualify as highly optimizing.

o I believe that a number of classical optimization techniques are difficult to apply to C source code. For example, pointers make it difficult for the compiler to figure out exactly what might happen and and so make it difficult to optimize the code.

o A lot of optimization techniques involve arithmetic expressions, loops, and the interaction between the two. Heavy duty computational code simply isn't the sort of thing that one commonly tries to do with a PIC. Rather, PIC code usually has lots of decision making, rather than computations, which is more difficult to optimize.

o The PIC hardware, with its limited register set, means that optimization strategies based on better allocating registers to variables and intermediate results aren't applicable.

Having said all that, I think your arguments are all but completely bogus. If you look at software development as a process of translating

o a solution strategy to
o algorithms that implement the strategy to
o source code to
o machine code

then for all intents and purposes the act of translating source code to machine code simply isn't a source of errors.

> At the level of blinking an LED or some other trivial app, I'm a complete
> believer that you can do it as well in C, as in any other language.

You haven't defined "well", but for any broad measure of "well", the last several decades of software engineering would appear to contradict this claim.

A couple of other random thoughts:

o C arguably doesn't qualify as a higher level language. A more interesting comparison would be between assembly language and Java.

o On one two-year project that developed essentially systems code (a system to visualize network state in real time), we implemented algorithms in Java that we either never would not have tried to in C or would not have been able to implement in C. High level languages often enable developers solve problems that aren't tractable in assembly language or even C.

> As the demand for performance rises though, there is a zone of overlap,
> but in the end, the only tool that will get you there is assembler.

(As usual) I don't believe the world is nearly this simple. Algorithmic improvements beat out mere optimizations for reasonably complex problems. Couple this with the facts that:

o Once assembler code works, there is a strong tendency to not
rewrite it because of the effort and risk involved, and
o Complex algorithms are less likely to be implemented in assembly
language.

> I tend to hang out in that neighborhood.

I understand that. I spend a decade writing assembly language systems
software, and thoroughly enjoyed it. But, I don't think bogus arguments
about the sources of errors and inefficiencies in software development
are of much use. You might consider simply saying that you enjoy
assembly language, that you can do better in assembly language than
many other less-talented programmers, and that the types of problems
you attack are more amenable assembly language than other problem
domains.

Yes, there is a place for assembly language code. But, that place gets
smaller and smaller every year as hardware gets more powerful and
cheaper, as compiler technology improves, and as languages improve.
I think the same can be said for C, but that is another story...

-tjs

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52. [picsig] Re: Atmel vs. PIC

From: David VanHorn <dvanhorn@cedar.net>
Date: Sun, 22 Sep 2002 16:40:21 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99966-2002.09.22-17.21.36--lyris.picsig#tapr.org@lists.tapr.org>
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>
>I never saw a question, or more precisely, the "question" you asked I
>considered rhetorical. That is, what consistently produces smaller object
>code, a seasoned experienced assembly programmer or a plurality of C
>compilers.

Well, that's what I said, my original question had to do with using C in spacecraft, when you don't
exactly know what it's going to generate, when you change things. We drifted off to the classic C/Asm
arguments.

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53. [picsig] Re: Atmel vs. PIC

From: David VanHorn <dvanhorn@cedar.net>
Date: Sun, 22 Sep 2002 16:56:42 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-99968-2002.09.22-17.37.49--lyris.picsig#tapr.org@lists.tapr.org>
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>Having said all that, I think your arguments are all but completely bogus. If you look at software
development as a process of translating
>
>o a solution strategy to
>o algorithms that implement the strategy to
>o source code to
>o machine code
>
>then for all intents and purposes the act of translating source code to machine code simply isn't a
source of errors.

My original question was specifically WRT to spacecraft use.
Compilers DO produce bad code from time to time.
See most any C compiler email list.
In a spacecraft, errors can have pretty large consequences, and you don't generally get to reboot and
try again (though I understand that's changing)

>o On one two-year project that developed essentially systems
> code (a system to visualize network state in real time), we
> implemented algorithms in Java that we either never would not
> have tried to in C or would not have been able to implement
> in C. High level languages often enable developers solve

>   problems that aren't tractable in assembly language or
>   even C.

No argument here.

>> As the demand for performance rises though, there is a zone of overlap,
>> but in the end, the only tool that will get you there is assembler.
>
>(As usual) I don't believe the world is nearly this simple. Algorithmic improvements beat out mere optimizations for reasonably complex problems.
>Couple this with the facts that:
>
>o   Once assembler code works, there is a strong tendency to not
>   rewrite it because of the effort and risk involved, and

I disagree completely here, but of course that's what I do.

>o   Complex algorithms are less likely to be implemented in assembly language.

No argument.

>> I tend to hang out in that neighborhood.
>
>I understand that. I spend a decade writing assembly language systems software, and thoroughly enjoyed it. But, I don't think bogus arguments about the sources of errors and inefficiencies in software development are of much use.

I asked the question, because my understanding of spacecraft software was that it was critically important to be able to absolutely certify it. In that context, if I make a one line ASM change, then I only need to examine the impact of that one instruction. If I make a "one line" change in C (and I realize that covers a lot of ground) how can I say that everything else in the program performs exactly as it did before?

>You might consider simply saying that you enjoy assembly language, that you can do better in assembly language than many other less-talented programmers, and that the types of problems you attack are more amenable assembly language than other problem domains.

If I was trying to make that point, I would have said that..

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54. [picsig] Re: Atmel vs. PIC

From: "HSHK" <hshk@ix.netcom.com>
Date: Mon, 23 Sep 2002 07:53:58 -0400 (Eastern Daylight Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-100070-2002.09.23-07.36.13--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Actually, alot of spacecraft/satellite code is written using Forth.

I use a couple different versions of it on 8051 micros.

What Forth does require thought is RAM, which is
easily added and expected in a scapecraft design.

Bill

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Sunday, September 22, 2002 17:40:23
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: Atmel vs. PIC

>
>I never saw a question, or more precisely, the "question" you asked I
>considered rhetorical. That is, what consistently produces smaller object
>code, a seasoned experienced assembly programmer or a plurality of C
>compilers.

Well, that's what I said, my original question had to do with using C in spacecraft, when you don't exactly know what it's going to generate, when you change things. We drifted off to the classic C/Asm arguments.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

55. [picsig] Re: Atmel vs. PIC

From: David VanHorn <dvanhorn@cedar.net>
Date: Mon, 23 Sep 2002 09:58:37 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-100080-2002.09.23-10.39.49--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:53 AM 9/23/2002 -0400, HSHK wrote:

>Actually, alot of spacecraft/satellite code is written using Forth.
>
>I use a couple different versions of it on 8051 micros.
>
>What Forth does require thought is RAM, which is
>easily added and expected in a scapecraft design.

Interesting. What makes forth attractive in this app?

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56. [picsig] Re: Atmel vs. PIC

From: "HSHK" <hshk@ix.netcom.com>
Date: Mon, 23 Sep 2002 11:01:52 -0400 (Eastern Daylight Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-100081-2002.09.23-10.44.37--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

hmmm... without getting into a Forth lesson...

for the user.. it like being interpreted... for
the machine..like compiled, executes fast...

can be a high level language or low level...like C can
be.

User extensible.....

Bill

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Monday, September 23, 2002 10:58:30
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: Atmel vs. PIC

At 07:53 AM 9/23/2002 -0400, HSHK wrote:

>Actually, alot of spacecraft/satellite code is written using Forth.
>
>I use a couple different versions of it on 8051 micros.
>
>What Forth does require thought is RAM, which is
>easily added and expected in a scapecraft design.

Interesting. What makes forth attractive in this app?

.

57. [picsig] Re: Atmel vs. PIC

From: Timothy J Salo <tjs@tc.umn.edu>
Date: Mon, 23 Sep 2002 10:46:31 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-100094-2002.09.23-11.28.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> To: picsig@lists.tapr.org
> Subject: Re: [picsig] Re: Atmel vs. PIC
>

> Date: Mon, 23 Sep 2002 07:53:58 -0400 (Eastern Daylight Time)
> From: "HSHK" <hshk@ix.netcom.com>
> Subject: [picsig] Re: Atmel vs. PIC
>
> Actually, alot of spacecraft/satellite code is written using Forth.

Are you referring to the use of IPS, a Forth-like language
used on AO-40 and a few other amateur satellites? Or, the
use of Forth on satellites beyond IPS?

What satellites do you know of that use Forth, beyond IPS on
AO-40 and a few related amateur satellites?

> I use a couple different versions of it on 8051 micros.

For space applications?

> What Forth does require thought is RAM, which is
> easily added and expected in a scapecraft design.

I not sure I understand your point. Forth requires RAM, but
I assume not very much of it. Or, are you contrasting
Forth's requirements with largely ROM-based systems?

-tjs

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

58. [picsig] Re: Atmel vs. PIC

From: "HSHK" <hshk@ix.netcom.com>
Date: Mon, 23 Sep 2002 12:18:18 -0400 (Eastern Daylight Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-100099-2002.09.23-12.00.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

No commerical and military sats have used Forth as
well as many other real-time processing control systems.

No the 8051 stuff was for control systems of other
earth bound things, but the reason for use are the
same.

No, Forth usually requires more RAM than ROM.

A function of how the Forth library is built and used.

There are many tutorials on-line for Forth.

For the 8051s I have used pForth and Camel Forth.

Try searching on those.

Bill

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Monday, September 23, 2002 11:47:08
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: Atmel vs. PIC

> To: picsig@lists.tapr.org
> Subject: Re: [picsig] Re: Atmel vs. PIC
>
> Date: Mon, 23 Sep 2002 07:53:58 -0400 (Eastern Daylight Time)
> From: "HSHK" <hshk@ix.netcom.com>
> Subject: [picsig] Re: Atmel vs. PIC
>
> Actually, alot of spacecraft/satellite code is written using Forth.

Are you referring to the use of IPS, a Forth-like language
used on AO-40 and a few other amateur satellites? Or, the
use of Forth on satellites beyond IPS?

What satellites do you know of that use Forth, beyond IPS on
AO-40 and a few related amateur satellites?

> I use a couple different versions of it on 8051 micros.

For space applications?

> What Forth does require thought is RAM, which is
> easily added and expected in a scapecraft design.

I not sure I understand your point. Forth requires RAM, but
I assume not very much of it. Or, are you contrasting
Forth's requirements with largely ROM-based systems?

-tjs

59. [picsig] Re: Atmel vs. PIC [draft]

From: Timothy J Salo <tjs@tc.umn.edu>
Date: Mon, 23 Sep 2002 16:18:55 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-100127-2002.09.23-17.00.38--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> To: picsig@lists.tapr.org
> Subject: Re: [picsig] Re: Atmel vs. PIC
>
> Date: Sun, 22 Sep 2002 16:56:42 -0500
> From: David VanHorn <dvanhorn@cedar.net>
> Subject: [picsig] Re: Atmel vs. PIC
> >   [...]
> >then for all intents and purposes the act of translating source code
> >to machine code simply isn't a source of errors.
>
> My original question was specifically WRT to spacecraft use.
> Compilers DO produce bad code from time to time.
> See most any C compiler email list.
> In a spacecraft, errors can have pretty large consequences, and you don't
> generally get to reboot and try again (though I understand that's changing)
>   [...]
> I asked the question, because my understanding of spacecraft software
> was that it was critically important to be able to absolutely certify it.
> In that context, if I make a one line ASM change, then I only need to
> examine the impact of that one instruction. If I make a "one line"
> change in C (and I realize that covers a lot of ground) how can I
> say that everything else in the program performs exactly as it did before?
>   [...]

A handful of comments on developing reliable software for demanding
applications follows. First, a couple of introductory comments.

o   I don't believe that spacecraft software is all that unique
        from a software engineering standpoint. There is a large
        class of software, often embedded, real-time software, that
        has very demanding reliability requirements. This includes,
        for example, implanted medical devices (e.g., pacemakers),
        other medical devices (e.g., radiation treatment equipment
        being a famous example), avionics software, automotive software,
        software for the design or operation of nuclear plants, etc.
        That is, the requirements are pretty generic and the solutions
        are pretty generic, although the details of particular
        solutions that may differ between industries. (Note that
        some of the early work on software reliability was done by
        Barry Boehm while he was at Boeing. I think Boeing's work
        on avionics software was the motivation for this work.)

o   Yes, to the extent I am correct that spacecraft
        software has requirements similar to lots of other types of
        software, this this quickly turn into a discussion of
        whether assembly language is a good place to start when
        seeking highly reliable software.

o   I believe that, in general, claims that software reliability
        can be enhanced by using assembly language rather than
        a modern high-level language (e.g., Java) or even a medium-
        level language (e.g., C) are likely to have little basis
        in fact.

Now, a series of random, but I would like to think relevant, comments.
Note that there is no particular order to these comments.

o   The use of a watchdog timer to reboot a confused system is

a very old technique. Likewise, a remotely activated reset mechanism (e.g., triggered by some magic sequence of symbols) has been around for a very long time. I believe that both of these have been used on satellites for decades. Perhaps, I didn't understand your comment.

- Yes, compilers do occasionally generate bad code and runtime libraries do sometimes contain errors. However, as I said before, it is very unusual for a mature compiler to generate bad code (and therefore pretty exciting when it is discovered). Because it is so unusual, it warrants e-mail is a fashion that the usual (and orders of magnitude more common) human-induced errors don't. In general, mature compilers simply don't have a lot of bugs, and those that do exist tend to be pretty obscure. On the other hand, it is certainly possible that the common PIC compilers aren't particularly reliable or mature. I don't have experience with PIC C compilers, but even if they are particularly unreliable, I don't this experience generalizes to compilers in general.

  I think that, on a large scale, that if your compiler isn't reliable, you are better off spending your money on improving your compiler, rather than choosing to use assembly language.

- In general, I don't believe the "I only changed one line" argument in any language. Side-effects occur in all languages. They certainly do in assembly language (e.g., a register gets clobbered, a page of code overflows, alignment of variables changes, etc.). I believe that the probability and likely scope of unexpected side effects are much lower in higher level languages (e.g., Java) than in medium level languages (e.g., C) and in turn than in assemble language. Unexpected side effects in assembly language are much more likely to have global scope (e.g., wild stores) and even in C (e.g., mangled pointers) than in a language like Java, which has a strong concept of an object, strong control over the scope of names, run-time bounds checking on array references and run-time type conversion checking (for those cases that can't be enforced at compile time).

- I haven't been directly involved in certifying software for use in critical devices, but I doubt that the "I only changed one line so I don't need to retest" argument is likely to work in any language. I argue above that the scope of retesting can reasonably be smaller in a higher level language, since the programming language somewhat constrains the behavior of the software. For example, source code flow analysis tools can more reliably locate all of the callers of a routine in a higher level language than in assembly language. So, I claim that retesting could be limited to a module and perhaps its callers in a higher level language, but due to the nature of errors that occur in assembly language, probably all of the code ought to be retested.

- I understand that a lot of the certification process for software involves examination of the tools and processes used to develop the software, as well as the software itself. The processes (and tools) that are available for the development of higher level languages are simply more credible to a certification authority than those available for the development of assembly language software. Certainly, there is more to this than simply a prejudice against assembly language. As I have already stated, higher-level languages constrain the types of errors that can be made (i.e., a lot of types of errors simply aren't possible) and better analysis tools are available for higher-level languages (again, because the behavior of the software being developed is constrained by the higher-level programming language, making some classes of analysis possible).

- I don't believe that any software is going to be certified (or even used in a demanding environment) without testing the behavior of the object code. This requirement exists independent of whether the object code was generated from Java or from assembly language. Furthermore, there are tools and techniques that make the testing of higher-level languages easier and more reliable that simply aren't available for assembly language software (e.g., testing coverage tools, automated testing scaffolding, and the IDEs Jim White mentioned). Again, I don't buy the "I only changed one line

so I don't need to retest argument, at least in critical
applications.

o It might be useful if I use a better model of the software
development than last time. Perhaps, software development can
be (usefully) described as a series of transformations:

- Requirements to
- High-level design to
- Detailed design to
- Programming language source code to
- Object code.

A useful model of reliable software development is one in which
requirements are correctly translated at each step, all
requirements are translated at each step, and no new
functionality not in the requirements is added at any step.
When higher-level languages are used, there are a variety of tools
available to either help perform these steps or to help
verify that the steps are performed correctly. For example,
there is a neat class of tools that will translate (both
directions) between UML and higher-level language source code,
particularly Java. Few of these tools exist for assembly
language software development, largely because they are
pretty much impossible. I also don't buy the argument
that humans can make these transformations more reliably
without tools than with tools. (You seem to be making
this argument with respect to compilers.)

o I suspect that a lot of critical real-time and/or
embedded software is still written in C, or perhaps
C++. I suspect this holds true for spacecraft as well.

o From an academic point of view, it might be interesting
to look at the use of IPS, a Forth-like stack language,
on AO-40. However, as you might guess, I wouldn't
recommend that use actually _use_ IPS.

o There is a project at NASA/GSFC (I think) to examine the use of
Java on spacecraft. (I think this is the roughly the
same crowd that is promoting the use of the Internet
protocols in space, rather than proprietary (for lack
of better term) protocols, such as found at
http://www.ccsds.org or even http://www.scps.org.
(I can't find the URL for the Java-in-space stuff
at the moment. If you are interested I can hunt for
it.) By the way, there are several flight software
groups at GSFC that have Web pages that might interest
you.

Having said all that, I don't expect you to stop using assembly
language. There are places were assembly language is necessary,
and others where it is appropriate, although these places are
becoming more rare as processors, languages, and software development
tools improve. However, you might consider not claiming that
the use of assembly language can lead to more reliable software,
even in the extremely limited circumstances you apparently claim.

Thanks for making me think about this stuff.

More free advice than you would ever want from:

-tjs

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60. [picsig] [Fwd: Re: picsig digest: September 23, 2002]

From: "J.P. Rouland" <jprouland@attbi.com>
Date: Tue, 24 Sep 2002 23:55:41 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-100404-2002.09.25-02.38.14--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

-------- Original Message --------
Subject: Re: Re: picsig digest: September 23, 2002
Date: Tue, 24 Sep 2002 23:20:00 -0500
From: Lyris <lyris@lists.tapr.org>

Reply-To: Lyris <lyris@lists.tapr.org>
To: jprouland@attbi.com

Sorry, your message was not sent out to 'picsig' because it
is
 too large. The maximum message size is 20k, and your
message was 30k long.

O.K., O.K., I cut the fluff.... and re-send..
J.P.

A quick comment from a non-programmer doing Assembly
Programming:
A few years ago, as a Hardware Engineer, I accepted to do
the coding on a DSP for a medical instrument. The basic code
existed, I "just" had to adapt it to the new toy.
After a year, and a re-write of 80% of the code, here are
the lessons I learned:
1) COMMENT! Comment! Comment!!!
My code ended up with 2-3 lines of comment per line of
Assembly. Overkill? I don't think so. Ask the guy who took
over.... Assembly is cryptic, and, unless you state clearly
what you intend to do before doing it, it's very hard on the
next guy...
And way faster to type 2 lines in plain english, than try to
understand a cryptic routine 3 months after writing it..
2) Subroutine headers:
After several hard-to-find bugs, I spent the time to
preamble EVERY routine with a header containing:
        - Variables used: ALL the variables accessed by the
routine, not just the ones modified. Expected contents at
entry, planned contents at exit.
        - Registers used: again, ALL. Many times, it's easy to
"quickly" use a register, and forget it had been set by the
previous routine, and was expected to be ready (unchanged!)
for the next one.. Now, I put this new routine inbetween,
and nothing works!
        - Work to be done: what is the routine supposed to do?
Basic underlying equation to be carried on, how it's done,
etc..
        - Status at exit: variables, registers. ALL! It either
shows that you have modified something you shouldn't have,
or (saved my butt a few times..), for the next routine,
shows you Register X still contains the data you were ready
to re-calculate...
By the end of the year, I could modify my code pretty fast,
without generating hard-to-find bugs.. Oh, yes, I DID write
bugs! But we were able to find them in minutes, not days...
For whatever it's worth...
J.P. Rouland, Project Engineer, mostly hardware.

TAPR PIC Development Special Interest Group digest wrote:
>
> TAPR PIC Development Special Interest Group Digest for Monday, September 23, 2002.
>
> 1. Re: Atmel vs. PIC
> 2. Re: Atmel vs. PIC
> 3. Re: Atmel vs. PIC
> 4. Re: Atmel vs. PIC
> 5. Re: Atmel vs. PIC
> 6. Re: Atmel vs. PIC [draft]
>
> --
> [snip the old stuff...]
J.P. Rouland

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October 2002

Original source file: picsig.0210
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0210

1. [picsig] fgetc() & fputc() !!

From: "Peter Bennett" <runtime@intelnet.net.gt>
Date: Tue, 1 Oct 2002 20:48:00 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-101342-2002.10.01-22.30.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello list,

I'm trying to read the NMEA (4800 N1) into a PIC16f84 and then output the
data to another port, the CCS Manual has a small sample:

```
#use rs232(baud=9600,xmit=pin_b2,rcv=pin_b3,stream=HOSTPC)
#use rs232(baud=1200,xmit=pin_b1,rcv=pin_b0,stream=GPS)
...
while(TRUE) {
   c=fgetc(GPS);
   fputc(c,HOSTPC);
}
```

I tryied this example, the only difference is that my GPS is 4800 not 1200
and I only get garbage on the screen. I think the time spent in sending the
chars to HOSTPC is too long and the PIC can not get the next character in
time...

Please advice
Thank you in advance
Peter Bennett

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2. [picsig] Re: fgetc() & fputc() !!

From: James Jefferson <jjeffers@aprsworld.net>
Date: Tue, 1 Oct 2002 22:59:31 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-101345-2002.10.01-23.40.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tuesday 01 October 2002 20:48, you wrote:
> I tryied this example, the only difference is that my GPS is 4800 not 1200
> and I only get garbage on the screen. I think the time spent in sending
> the chars to HOSTPC is too long and the PIC can not get the next character
> in time...

Correct assumption. You can do the echo by either using hardware interrupts or
the hardware USART.

-Jim KB0THN

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] Re: fgetc() & fputc() !!

From: "HSHK" <hshk@ix.netcom.com>
Date: Wed, 2 Oct 2002 07:58:21 -0400 (Eastern Daylight Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-101361-2002.10.02-07.41.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The baud in the first #use rs232 statement is 9600 baud.

Bill KA8VIT

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Tuesday, October 01, 2002 22:48:27
To: TAPR PIC Development Special Interest Group

Subject: [picsig] fgetc() & fputc() !!

Hello list,

I'm trying to read the NMEA (4800 N1) into a PIC16f84 and then output the
data to another port, the CCS Manual has a small sample:

```
#users232(baud=9600,xmit=pin_b2,rcv=pin_b3,stream=HOSTPC)
#users232(baud=1200,xmit=pin_b1,rcv=pin_b0,stream=GPS)
....
while(TRUE) {
c=fgetc(GPS);
fputc(c,HOSTPC);
}
```

I tryied this example, the only difference is that my GPS is 4800 not 1200
and I only get garbage on the screen. I think the time spent in sending the
chars to HOSTPC is too long and the PIC can not get the next character in
time...

Please advice
Thank you in advance
Peter Bennett

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.

4. [picsig] Re: fgetc() & fputc() !!

From: "Andrew Rich" <andrew.rich@bigpond.com>
Date: Wed, 2 Oct 2002 22:08:33 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-101367-2002.10.02-07.50.44--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am using the basic stamp II and it only has 16 bytes to play with in RAM

What I have to do is get :-

LAT
LON
E\W
N\S

There is no way the PIC can keep up with the whole string, it just puts out
rubbish

```
'--------------------------------------------------------------------------
--------------
const:  lat var byte(8)
   long var byte(9)
   ns var byte
   ew var byte
   cov var byte
   y var byte
'--------------------------------------------------------------------------
--------------
test:   for y = 1 to 3
   high 12
   pause 100
   low 12
   pause 100
   next
'--------------------------------------------------------------------------
--------------
ping:   'serin 1,188+$4000,[wait ("PING"),str long\9,str ns\1]
   'serout 4,16576,["AT+CMGS=",34,str long\9,str ns\1,34,cr]
'--------------------------------------------------------------------------
--------------
testgps:  serin 2,188+$4000,5000,gpsfail,[wait("$GPRMC"),skip 1,str lat\6]
   serout 4,16576,["GPS: ",str lat\6]
   serin 2,188+$4000,5000,gpsfail,[wait("$GPRMC"),skip 8,str cov\1]
   low 10
   if cov = "V" then nosats
   if cov = "A" then sats
```

```
   goto ping
'--------------------------------------------------------------------------
--------------
sats:   low 8
   low 10
   high 12
   serin 2,188+$4000,5000,gpsfail,[wait("$GPRMC"),skip 8,str cov\1, skip
1,str lat\8,skip 1,str ns\1,skip 1,str long\9,skip 1,str ew\1]
   serout 4,16576,[" Position: ",str lat\8,str ns\1," ",str long\9, str
ew\1," ",cr]
   goto ping
'--------------------------------------------------------------------------
--------------
nosats:  low 8
   low 12
   high 10
   serout 4,16576,[" Position: Searching....",cr]
   goto ping
'--------------------------------------------------------------------------
--------------
gpsfail:  low 10
   low 12
   high 8
   serout 4,16576,["GPS: Failed",cr]
   goto ping
'--------------------------------------------------------------------------
--------------
```

-----Original Message-----
From: bounce-picsig-28143@lists.tapr.org
[mailto:bounce-picsig-28143@lists.tapr.org]On Behalf Of HSHK
Sent: Wednesday, 2 October 2002 21:58
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: fgetc() & fputc() !!

The baud in the first #use rs232 statement is 9600 baud.

Bill KA8VIT

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Tuesday, October 01, 2002 22:48:27
To: TAPR PIC Development Special Interest Group
Subject: [picsig] fgetc() & fputc() !!

Hello list,

I'm trying to read the NMEA (4800 N1) into a PIC16f84 and then
output the
data to another port, the CCS Manual has a small sample:

```
#users232(baud=9600,xmit=pin_b2,rcv=pin_b3,stream=HOSTPC)
#users232(baud=1200,xmit=pin_b1,rcv=pin_b0,stream=GPS)
....
while(TRUE) {
c=fgetc(GPS);
fputc(c,HOSTPC);
}
```

I tryied this example, the only difference is that my GPS is 4800
not 1200
and I only get garbage on the screen. I think the time spent in
sending the
chars to HOSTPC is too long and the PIC can not get the next
character in
time...

Please advice
Thank you in advance
Peter Bennett

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.

_____
IncrediMail - Email has finally evolved - Click Here
[Attachment: ATT00078.gif; image/gif; 494 bytes]

5. [picsig] RE: fgetc() & fputc() !!

From: "n7tcf" <n7tcf@cox.net>
Date: Wed, 2 Oct 2002 08:47:32 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-101380-2002.10.02-11.29.43--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

A lot of bit-banging is going on here. Can you move to a processor with
built-in UART?

Jim Sullivan
N7TCF

Web page: http://www.qsl.net/n7tcf
Weather Station: http://members.cox.net/n7tcfweather

-----Original Message-----
From: bounce-picsig-30343@lists.tapr.org
[mailto:bounce-picsig-30343@lists.tapr.org]On Behalf Of Peter Bennett
Sent: Tuesday, October 01, 2002 18:48
To: TAPR PIC Development Special Interest Group
Subject: [picsig] fgetc() & fputc() !!

Hello list,

I'm trying to read the NMEA (4800 N1) into a PIC16f84 and then output the
data to another port, the CCS Manual has a small sample:

```
#use rs232(baud=9600,xmit=pin_b2,rcv=pin_b3,stream=HOSTPC)
#use rs232(baud=1200,xmit=pin_b1,rcv=pin_b0,stream=GPS)
...
while(TRUE) {
   c=fgetc(GPS);
   fputc(c,HOSTPC);
}
```

I tryied this example, the only difference is that my GPS is 4800 not 1200
and I only get garbage on the screen. I think the time spent in sending the
chars to HOSTPC is too long and the PIC can not get the next character in
time...

Please advice
Thank you in advance
Peter Bennett

You are currently subscribed to picsig as: n7tcf@cox.net
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

6. [picsig] RE: fgetc() & fputc() !!

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Wed, 2 Oct 2002 12:32:38 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-101381-2002.10.02-12.08.22--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

To receive data with an 'f84 at 4800 baud is marginal. You might try it if you
are using a fairly fast clock speed; 10mhz or so.

The CCS support library calls block until they complete. That means the fputc
call doesn't return for approx 2.2ms. If the next character starts during this
time, you'll miss the beginning of the character. The only way that this chip
will do what you want is to buffer the sentence before sending it out.

Try this instead

```
 char buf[MAXBUF];
 char c;
 int i, j;
 while(TRUE) {
    while (fgetc(GPS) != '$');
    buf[0] = '$';
    i = 1;
    do {
      c = fgetc(GPS);
      buf[i] = c;
      i = i + 1;
      if (i == (MAXBUF - 2)) break; /* don't overrun buffer */
    } while c != '*';
    buf[i]= fgetc(GPS);
    i = i + 1;
    buf[i]= fgetc(GPS);
    i = i + 1;
    for (j = 0; j < i; j++)
      fputc(buf[j],HOSTPC);
 }
```

Rich Carter KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Peter Bennett
> Sent: Tuesday, October 01, 2002 9:48 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] fgetc() & fputc() !!
>
>
> Hello list,
>
> I'm trying to read the NMEA (4800 N1) into a PIC16f84 and then output the
> data to another port, the CCS Manual has a small sample:
>
> #use rs232(baud=9600,xmit=pin_b2,rcv=pin_b3,stream=HOSTPC)
> #use rs232(baud=1200,xmit=pin_b1,rcv=pin_b0,stream=GPS)
> ...
> while(TRUE) {
>   c=fgetc(GPS);
>   fputc(c,HOSTPC);
> }
>
> I tryied this example, the only difference is that my GPS is 4800 not 1200
> and I only get garbage on the screen. I think the time spent in sending the
> chars to HOSTPC is too long and the PIC can not get the next character in
> time...
>
> Please advice
> Thank you in advance
> Peter Bennett
>
>
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] Re: fgetc() & fputc() !!

From: David VanHorn <dvanhorn@cedar.net>
Date: Wed, 02 Oct 2002 11:36:09 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-101383-2002.10.02-12.17.58--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 10:08 PM 10/2/2002 +1000, Andrew Rich wrote:
>I am using the basic stamp II and it only has 16 bytes to play with in RAM

Well.. This is one indication that you're doing something wrong.
:)
Interpreted languages are always slow, especially so on small chips.

Programmed in assembler, the PIC F84 can deal with 9600 or faster.
You also preserve more of the ram space to put things in. BTDT.

An AVR8535 would give you a Uart, a couple timers, lots of ram, EE, and rom, and you could use JAVRbasic
 to program for it, or AVRGCC (c) or assembler.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

8. [picsig] Write

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Wed, 02 Oct 2002 18:41:05 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-101410-2002.10.02-18.27.45--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR members:

Here is your chance to become rich and famous! Well, maybe not rich, but
certainly famous.

The editorial board of Packet Status Register (PSR, TAPR□s quarterly
newsletter) is now soliciting articles, news items, etc. for the next issue
of the newsletter. Topics related to digital Amateur Radio will be given
preference and the editorial board reserves the right to determine what is
suitable for publication.

E-mail your contributions to wa1lou@tapr.org ASAP because the deadline for
the next issue of the newsletter is October 24.

73,

Stan Horzepa, WA1LOU, PSR Editor

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

9. [picsig] Pic e

From: "ben" <ben@cloudnet.com>
Date: Sat, 5 Oct 2002 21:07:47 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-101880-2002.10.05-21.46.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,
    Hows everybody doing tonight? My name's Ben. K0BLR. I'm thinking about
buying a Pic-e However how complicated is it to put it together? I've never
put a kit together before and is there kits already put together that can
bought already?

Thanks,

Ben, K0BLR
EN25uo

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

10. [picsig] RE: Pic e

From: "Andreas Junge - DSLX" <n6nu@arrl.net>
Date: Sun, 6 Oct 2002 15:50:14 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-101965-2002.10.06-18.32.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ben,

unless you know how to assemble the source code and know how to program the
pic chip I suggest you get a TinyTrak II. It is cheaper, has better
functionality and is easier to build and operate ...

    http://www.byonics.com/

Andreas, N6NU

> -----Original Message-----
> From: bounce-picsig-30684@lists.tapr.org
> [mailto:bounce-picsig-30684@lists.tapr.org]On Behalf Of ben
> Sent: Saturday, October 05, 2002 7:08 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Pic e
>
>
> Hi,
>   Hows everybody doing tonight? My name's Ben. K0BLR. I'm thinking about
> buying a Pic-e However how complicated is it to put it together?
> I've never
> put a kit together before and is there kits already put together that can
> bought already?
>
> Thanks,
>
> Ben, K0BLR
> EN25uo
>
>
> ---
> You are currently subscribed to picsig as: n6nu@arrl.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

11. [picsig] RE: Pic e

From: Jeff King <jeff@aerodata.net>
Date: Sun, 6 Oct 2002 21:28:33 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-101978-2002.10.06-21.11.18--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Actually, the PIC-E has more functionality then the TINI-Trak 2. The
TinyTrack 2 does a specific job alot better, the PIC-E is a more general
purpose tool.

--
Jeff King, jeff@aerodata.net on 10/06/2002

On Sun, 6 Oct 2002 15:50:14 -0700, Andreas Junge - DSLX wrote:
>Ben,
>
>unless you know how to assemble the source code and know how to
>program the
>pic chip I suggest you get a TinyTrak II. It is cheaper, has better
>functionality and is easier to build and operate ...
>
>http://www.byonics.com/
>
>Andreas, N6NU
>
>

>
>>-----Original Message-----
>>From: bounce-picsig-30684@lists.tapr.org
>>[mailto:bounce-picsig-30684@lists.tapr.org]On Behalf Of ben
>>Sent: Saturday, October 05, 2002 7:08 PM
>>To: TAPR PIC Development Special Interest Group
>>Subject: [picsig] Pic e
>>
>>
>>Hi,
>>Hows everybody doing tonight? My name's Ben. K0BLR. I'm thinking
>>about
>>buying a Pic-e However how complicated is it to put it together?
>>I've never
>>put a kit together before and is there kits already put together
>>that can
>>bought already?
>>
>>Thanks,
>>
>>Ben, K0BLR
>>EN25uo
>>
>>
>>---
>>You are currently subscribed to picsig as: n6nu@arrl.net
>>To unsubscribe send a blank email to leave-picsig-
>>6948X@lists.tapr.org
>>
>>
>
>
>---
>You are currently subscribed to picsig as: jeff@aerodata.net
>To unsubscribe send a blank email to leave-picsig-
>6948X@lists.tapr.org

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

12. [picsig] RE: Pic e

From: "Mark Arnold" <kb8yjv@earthlink.net>
Date: Sun, 6 Oct 2002 23:35:6 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-101983-2002.10.06-22.49.26--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I did not know how to assemble the source code or program the pic chip, but
I carefully read the instructions in the software provided and was able to
do it successfully. I am now trying to learn more about it.
Mark KB8YJV

> [Original Message]
> From: Andreas Junge - DSLX <n6nu@arrl.net>
> To: TAPR PIC Development Special Interest Group <picsig@lists.tapr.org>
> Date: 10/6/02 6:51:04 PM
> Subject: [picsig] RE: Pic e
>
> Ben,

>

> unless you know how to assemble the source code and know how to program
the

> pic chip I suggest you get a TinyTrak II. It is cheaper, has better

> functionality and is easier to build and operate ...

>

>   http://www.byonics.com/

>

> Andreas, N6NU

>

>

>

> > -----Original Message-----

> > From: bounce-picsig-30684@lists.tapr.org

> > [mailto:bounce-picsig-30684@lists.tapr.org]On Behalf Of ben

> > Sent: Saturday, October 05, 2002 7:08 PM

> > To: TAPR PIC Development Special Interest Group

> > Subject: [picsig] Pic e

> >

> >

> > Hi,

> > Hows everybody doing tonight? My name's Ben. K0BLR. I'm thinking
about

> > buying a Pic-e However how complicated is it to put it together?

> > I've never

> > put a kit together before and is there kits already put together that
can

> > bought already?

> >

> > Thanks,

> >

> > Ben, K0BLR

> > EN25uo

> >

> >

> > ---

> > You are currently subscribed to picsig as: n6nu@arrl.net

> > To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

> >

> >

>

>

> ---

> You are currently subscribed to picsig as: kb8yjv@earthlink.net

> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

--- Mark Arnold
--- kb8yjv@earthlink.net
--- EarthLink: It's your Internet.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

13. [picsig] Re: Pic e

From: "Patrick Karp" <pkarp@conwaycorp.net>
Date: Mon, 7 Oct 2002 07:13:24 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102025-2002.10.07-07.55.54--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> >
> >
> > Hi,
> >   Hows everybody doing tonight? My name's Ben. K0BLR. I'm
thinking about
> > buying a Pic-e However how complicated is it to put it together?
> > I've never
> > put a kit together before and is there kits already put together
that can
> > bought already?
> >
> > Thanks,
> >
> > Ben, K0BLR
> > EN25uo
> >
Hi Ben

I found the Pic-e extreamly easy to build.   I was quite impressed
with the directions that come with it. If you feel that you can
solder reasonably well I don't thing you'll have any problems.
73
Pat (KD5AAY)

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

14. [picsig] RE: Pic e

From: "Andreas Junge - DSLX" <n6nu@arrl.net>
Date: Mon, 7 Oct 2002 10:35:07 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102067-2002.10.07-13.17.16--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
> Actually, the PIC-E has more functionality then the TINI-Trak 2. The
> TinyTrack 2 does a specific job alot better, the PIC-E is a more general
> purpose tool.
>

Agreed, it is versatile/multi porpose.

BTW is there an ETA on the PIC E II?

Now that would be a good platform for developments ...

Andreas, N6NU

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

15. [picsig] RE: Pic e

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Mon, 7 Oct 2002 15:02:01 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102072-2002.10.07-14.37.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I don't have an ETA yet. I'm hoping to have beta kits available before xmas.
These kits would have functional hardware, but the software will not be
completely tested. Beta kits would be useful for people doing their own
software or those who want to help test the application under development.

Rich Carter
Wind River Systems
10 Tara Blvd SWT 330
Nashua NH 03062
603-897-2071

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andreas Junge -
> DSLX
> Sent: Monday, October 07, 2002 1:35 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Pic e
>
>
> >
> > Actually, the PIC-E has more functionality then the TINI-Trak 2. The
> > TinyTrack 2 does a specific job alot better, the PIC-E is a more general
> > purpose tool.
> >
>
> Agreed, it is versatile/multi porpose.
>
> BTW is there an ETA on the PIC E II?
>
> Now that would be a good platform for developments ...
>
> Andreas, N6NU
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

16. [picsig] RE: Pic e

From: Bill Vodall - WA7NWP <wa7nwp@yahoo.com>
Date: Mon, 07 Oct 2002 12:03:54 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102074-2002.10.07-14.50.34--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 03:02 PM 10/7/02 -0400, Rich Carter - KE1EV wrote:
>I don't have an ETA yet. I'm hoping to have beta kits available before xmas.

Is there a schematic? Where's the software? We can start playing early....

Last night as I picked up my wife from the bus she said, "Why can't you
make a tracker for me - just like the car has?"   I sure love her!

Bill - WA7NWP

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

17. [picsig] RE: Pic e

From: "Andreas Junge - DSLX" <n6nu@arrl.net>
Date: Mon, 7 Oct 2002 12:32:02 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102083-2002.10.07-15.14.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
> At 03:02 PM 10/7/02 -0400, Rich Carter - KE1EV wrote:
> >I don't have an ETA yet. I'm hoping to have beta kits available
> before xmas.

I would like to beta this. I program 16F877 for my work projects, using the
Hitech PICC compiler.

Andreas, N6NU

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

18. [picsig] RE: Pic e

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Mon, 7 Oct 2002 16:13:23 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102087-2002.10.07-15.49.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If you send me a reply that promises that you won't use the code or hardware
design for commercial purposes, I'll send you a copy of the schematic, source
code, and supporting documentation. I plan to post the stuff as soon as I can
get TAPR to update their web site. I don't mind making it public as long as
people don't take my work and start making money from it. I have a lot of time
in the project.

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Bill Vodall -
> WA7NWP
> Sent: Monday, October 07, 2002 3:04 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Pic e
>
>
> At 03:02 PM 10/7/02 -0400, Rich Carter - KE1EV wrote:
> >I don't have an ETA yet. I'm hoping to have beta kits available before xmas.
>
> Is there a schematic?   Where's the software? We can start playing early....
>
> Last night as I picked up my wife from the bus she said, "Why can't you
> make a tracker for me - just like the car has?"   I sure love her!
>
> Bill - WA7NWP
>
>
>
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

19. [picsig] RE: Pic e

From: Jeff King <jeff@aerodata.net>
Date: Mon, 07 Oct 2002 15:16:20 -0500 (CDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102089-2002.10.07-15.58.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rich:

What processor did you settle on here?

-Jeff

Quoting Rich Carter - KE1EV <ke1ev@arrl.net>:

> I don't have an ETA yet. I'm hoping to have beta kits available before
> xmas.
> These kits would have functional hardware, but the software will not
> be
> completely tested. Beta kits would be useful for people doing their
> own
> software or those who want to help test the application under

> development.
>
> Rich Carter
> Wind River Systems
> 10 Tara Blvd SWT 330
> Nashua NH 03062
> 603-897-2071
>
>
> > -----Original Message-----
> > From: bounce-picsig-21297@lists.tapr.org
> > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andreas Junge
> -
> > DSLX
> > Sent: Monday, October 07, 2002 1:35 PM
> > To: TAPR PIC Development Special Interest Group
> > Subject: [picsig] RE: Pic e
> >
> >
> > >
> > > Actually, the PIC-E has more functionality then the TINI-Trak 2.
> The
> > > TinyTrack 2 does a specific job alot better, the PIC-E is a more
> general
> > > purpose tool.
> > >
> >
> > Agreed, it is versatile/multi porpose.
> >
> > BTW is there an ETA on the PIC E II?
> >
> > Now that would be a good platform for developments ...
> >
> > Andreas, N6NU
> >
> > ---
> > You are currently subscribed to picsig as: KE1EV@ARRL.net
> > To unsubscribe send a blank email to
> leave-picsig-6890E@lists.tapr.org
> >
>
>
> ---
> You are currently subscribed to picsig as: jeff@aerodata.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

20. [picsig] RE: Pic e

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Mon, 7 Oct 2002 16:23:29 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102090-2002.10.07-15.59.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'll send out an announcement when the kit is available.
> I would like to beta this. I program 16F877 for my work projects, using the
> Hitech PICC compiler.

Rich Carter

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

21. [picsig] RE: Pic e

From: Jeff King <jeff@aerodata.net>
Date: Mon, 07 Oct 2002 15:25:52 -0500 (CDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102091-2002.10.07-16.08.03--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Quoting Rich Carter - KE1EV <ke1ev@arrl.net>:

> I don't mind making it public as long as

> people don't take my work and start making money from it.
> I have a lot of time in the project.

GPL it (poison pill) or alternately let people *pay* you if they use it in a
commercial product. I've paid money to opensource authors to use their code,
even though in many cases I didn't need to.

Capitalism is a wonderful thing and many people wrongly give the opensource
model the ring of marxism, which it is not, or that you can't make money off
it, which you can.

-Jeff

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

22. [picsig] RE: Pic e

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Mon, 7 Oct 2002 17:03:44 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102094-2002.10.07-16.39.32--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Its a 16f876 with an external SPI bus 8kb memory chip (fram).

Rich Carter
KE1EV
> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Jeff King
> Sent: Monday, October 07, 2002 4:16 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Pic e
>
>
> Rich:
>
> What processor did you settle on here?
>
> -Jeff
>
> Quoting Rich Carter - KE1EV <ke1ev@arrl.net>:
>
> > I don't have an ETA yet. I'm hoping to have beta kits available before
> > xmas.
> > These kits would have functional hardware, but the software will not
> > be
> > completely tested. Beta kits would be useful for people doing their
> > own
> > software or those who want to help test the application under
> > development.
> >
> > Rich Carter
> > Wind River Systems
> > 10 Tara Blvd SWT 330
> > Nashua NH 03062
> > 603-897-2071
> >
> >
> > > -----Original Message-----
> > > From: bounce-picsig-21297@lists.tapr.org
> > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andreas Junge
> > -
> > > DSLX
> > > Sent: Monday, October 07, 2002 1:35 PM
> > > To: TAPR PIC Development Special Interest Group
> > > Subject: [picsig] RE: Pic e
> > >
> > >
> > > >
> > > > Actually, the PIC-E has more functionality then the TINI-Trak 2.
> > The
> > > > TinyTrack 2 does a specific job alot better, the PIC-E is a more
> > general
> > > > purpose tool.
> > > >
> > >
> > > Agreed, it is versatile/multi porpose.

> > >
> > > BTW is there an ETA on the PIC E II?
> > >
> > > Now that would be a good platform for developments ...
> > >
> > > Andreas, N6NU
> > >
> > > ---
> > > You are currently subscribed to picsig as: KE1EV@ARRL.net
> > > To unsubscribe send a blank email to
> > leave-picsig-6890E@lists.tapr.org
> > >
> >
> >
> > ---
> > You are currently subscribed to picsig as: jeff@aerodata.net
> > To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
> >
> >
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

23. [picsig] RE: Pic e

From: James Jefferson <jjeffers@aprsworld.net>
Date: Mon, 7 Oct 2002 16:27:46 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102096-2002.10.07-17.08.05--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> If you send me a reply that promises that you won't use the code or
> hardware design for commercial purposes, I'll send you a copy of the
> schematic, source code, and supporting docume (snip)

How many ways are there to make a Bell 202 modem and hook external memory to a
processor?

Good thing I didn't license the hardware design for my 1k2telem board from
years ago under the same license you've just described. It had a 1200 baud
modem, serial port, and external FRAM too.

Food for thought,

-Jim Jefferson KB0THN

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

24. [picsig] RE: Pic e

From: David VanHorn <dvanhorn@cedar.net>
Date: Mon, 07 Oct 2002 16:29:37 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102102-2002.10.07-19.14.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>Good thing I didn't license the hardware design for my 1k2telem board from
>years ago under the same license you've just described. It had a 1200 baud
>modem, serial port, and external FRAM too.

Verifone Tranz-330 and ZON terminals designed in '83 had single chip 202 modems with four wire
interfaces. I thought about doing AX25 with them way back when, but never found the time. :(
Would have been a cool TNC though, with 16 char VFD display and keyboard, and internal programming
language.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

25. [picsig] RE: Pic e

From: John Morley <jmorley@endeavour-usa.com>
Date: Mon, 07 Oct 2002 19:45:47 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102104-2002.10.07-19.27.50--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hey Gang,

I'll chime in here to say that an initial run of PIC-E-II PCB's is currently in
fabrication. I hope to have the boards back sometime next week, or at the
latest,
early the following week. Glad to see that there is still some interest in the
project!

John KA1JMF

At 03:02 PM 10/7/2002 -0400, you wrote:
>I don't have an ETA yet. I'm hoping to have beta kits available before xmas.
>These kits would have functional hardware, but the software will not be
>completely tested. Beta kits would be useful for people doing their own
>software or those who want to help test the application under development.
>
>Rich Carter
>Wind River Systems
>10 Tara Blvd SWT 330
>Nashua NH 03062
>603-897-2071
>
>
> > -----Original Message-----
> > From: bounce-picsig-21297@lists.tapr.org
> > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andreas Junge -
> > DSLX
> > Sent: Monday, October 07, 2002 1:35 PM
> > To: TAPR PIC Development Special Interest Group
> > Subject: [picsig] RE: Pic e
> >
> >
> > >
> > > Actually, the PIC-E has more functionality then the TINI-Trak 2. The
> > > TinyTrack 2 does a specific job alot better, the PIC-E is a more general
> > > purpose tool.
> > >
> >
> > Agreed, it is versatile/multi porpose.
> >
> > BTW is there an ETA on the PIC E II?
> >
> > Now that would be a good platform for developments ...
> >
> > Andreas, N6NU
> >
> > ---
> > You are currently subscribed to picsig as: KE1EV@ARRL.net
> > To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
> >
>
>
>---
>You are currently subscribed to picsig as: jmorley@endeavour-usa.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

26. [picsig] RE: Pic e

From: "HSHK" <hshk@ix.netcom.com>
Date: Tue, 8 Oct 2002 07:31:18 -0400 (Eastern Daylight Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102160-2002.10.08-07.14.35--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rich,

I would be interested as well.

I promise not to use it for amy commerical purposes.

Really !

73 ES TNX SK DE KA8VIT

Bill KA8VIT

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Monday, October 07, 2002 16:07:42
To: TAPR PIC Development Special Interest Group
Subject: [picsig] RE: Pic e

If you send me a reply that promises that you won't use the code or hardware
design for commercial purposes, I'll send you a copy of the schematic,
source
code, and supporting documentation. I plan to post the stuff as soon as I
can
get TAPR to update their web site. I don't mind making it public as long as
people don't take my work and start making money from it. I have a lot of
time
in the project.

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Bill Vodall -
> WA7NWP
> Sent: Monday, October 07, 2002 3:04 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Pic e
>
>
> At 03:02 PM 10/7/02 -0400, Rich Carter - KE1EV wrote:
> >I don't have an ETA yet. I'm hoping to have beta kits available before
xmas.
>
> Is there a schematic? Where's the software? We can start playing early....
>
> Last night as I picked up my wife from the bus she said, "Why can't you
> make a tracker for me - just like the car has?" I sure love her!
>
> Bill - WA7NWP
>
>
>
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: hshk@ix.netcom.com
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

.

27. [picsig] RE: Pic e

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Tue, 8 Oct 2002 08:59:04 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102163-2002.10.08-08.34.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The hardware is trivial. The software is not. How many ways are there to
concurrently receive GPS sentences, transmit packets, and service a computer
serial port without an operating system?

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of James Jefferson
> Sent: Monday, October 07, 2002 5:28 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Pic e
>
>
>
> > If you send me a reply that promises that you won't use the code or
> > hardware design for commercial purposes, I'll send you a copy of the
> > schematic, source code, and supporting docume (snip)
>
> How many ways are there to make a Bell 202 modem and hook external
> memory to a
> processor?
>
> Good thing I didn't license the hardware design for my 1k2telem board from
> years ago under the same license you've just described. It had a 1200 baud
> modem, serial port, and external FRAM too.
>
> Food for thought,
>
> -Jim Jefferson KB0THN
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

28. [picsig] RE: Pic e

From: David VanHorn <dvanhorn@cedar.net>
Date: Tue, 08 Oct 2002 09:19:28 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102173-2002.10.08-10.01.48--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 08:59 AM 10/8/2002 -0400, Rich Carter - KE1EV wrote:
>The hardware is trivial. The software is not. How many ways are there to
>concurrently receive GPS sentences, transmit packets, and service a computer
>serial port without an operating system?

Interrupts. :)

I've made my cooperative RTOS for the AVR available to the public.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

29. [picsig] RE: Pic e

From: Jim White <jim@coloradosatellite.com>
Date: Tue, 08 Oct 2002 09:58:50 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-102181-2002.10.08-11.43.37--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dave,
I'd be interested in looking at your RTOS. Where can I find more information?

Jim
jim@coloradosatellite.com

At 09:19 AM 10/08/2002 -0500, you wrote:
>At 08:59 AM 10/8/2002 -0400, Rich Carter - KE1EV wrote:
> >The hardware is trivial. The software is not. How many ways are there to
> >concurrently receive GPS sentences, transmit packets, and service a computer
> >serial port without an operating system?
>
>Interrupts. :)
>
>I've made my cooperative RTOS for the AVR available to the public.
>

>
>---
>You are currently subscribed to picsig as: jim@coloradosatellite.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

30. [picsig] Loss of audio signal when radio is connected

From: MTWAL <MTWAL@cc.usu.edu>
Date: Fri, 18 Oct 2002 15:55:17 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-103470-2002.10.18-17.38.09--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am connecting the PIC-E to a business band radio. When running the
diagnostic software with the radio disconnected and using an oscilloscope to
look at the TXOUT signal we have a nice waveform. When the radio is connected
we lose the waveform at the capacitor C2. It is on the modem side of the
capacitor, but at the radio side there is no signal. I would greatly
appreciate any suggestions.

Thanks,

Matt

Matt Waldron
245-2761
mtwal@cc.usu.edu

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

31. [picsig] Re: Loss of audio signal when radio is connected

From: Steve Slay <snslay@swbell.net>
Date: Sat, 19 Oct 2002 06:34:12 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-103579-2002.10.19-07.17.37--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Reverse polarity?

Steve Slay
KC5MVY
Where am I now? http://www.findu.com/cgi-bin/find.cgi?call=KC5MVY
Where have I been lately?
http://www.findu.com/cgi-bin/track.cgi?call=KC5MVY
With weather RADAR
http://www.findu.com/cgi-bin/find.cgi?call=KC5MVY&radar=LBB

"Only two things are infinite, the universe and human stupidity, and I'm not
sure about the former."   Albert Einstein

----- Original Message -----
From: "MTWAL" <MTWAL@cc.usu.edu>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Friday, October 18, 2002 4:55 PM
Subject: [picsig] Loss of audio signal when radio is connected

> I am connecting the PIC-E to a business band radio. When running the
> diagnostic software with the radio disconnected and using an oscilloscope
to
> look at the TXOUT signal we have a nice waveform. When the radio is
connected
> we lose the waveform at the capacitor C2. It is on the modem side of the
> capacitor, but at the radio side there is no signal. I would greatly
> appreciate any suggestions.
>
> Thanks,
>
> Matt
>
> Matt Waldron
> 245-2761

> mtwal@cc.usu.edu
>
>
> ---
> You are currently subscribed to picsig as: snslay@swbell.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

32. [picsig] Re: Loss of audio signal when radio is connected

From: "CHIGA" <nh7s@hawaii.rr.com>
Date: Sat, 19 Oct 2002 20:11:04 -1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-103720-2002.10.20-01.57.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Disclaimer: I don't know if the PIC-E allowed to be hooked up to a
business band radio, as the business band radio does not operate under the
FCC Part 97 rules governing Amateur Radio. In otherwords, if you follow
what I'm saying you are doing it under your own accord not because I'm
responding to you request.

    I don't own PIC-E, I'm responding only because I have seen only one
response to your question.

    In addition to what Steve Slay/KC6MVY mentioned about reverse polarity,
the following might reveal what the problem is:

    1. Disconnect the radio.

    2. If the audio appears at J1-5 (radio side of capacitor C2), then the
radio is loading down the audio output of the PIC-E. This indicates you are
using the wrong pin on the radio or the audio impedence is incorrect for the
radio.

    3. If there is no audio at J1-5, check for audio (oscilloscope) at V1
(10K pot), if there's audio then C2 is open. Continue checking for audio
back to pin 7 of the MX614. You should be able to conclude what the problem
is.

    73 - Cal NH7S.

----- Original Message -----
From: "MTWAL" <MTWAL@cc.usu.edu>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Friday, October 18, 2002 11:55 AM
Subject: [picsig] Loss of audio signal when radio is connected

> I am connecting the PIC-E to a business band radio. When running the
> diagnostic software with the radio disconnected and using an oscilloscope
to
> look at the TXOUT signal we have a nice waveform. When the radio is
connected
> we lose the waveform at the capacitor C2. It is on the modem side of the
> capacitor, but at the radio side there is no signal. I would greatly
> appreciate any suggestions.
>
> Thanks,
>
> Matt
>
> Matt Waldron
> 245-2761
> mtwal@cc.usu.edu
>
>
> ---
> You are currently subscribed to picsig as: nh7s@hawaii.rr.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org

To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

33. [picsig] RE: picsig digest: October 19, 2002

From: MTWAL <MTWAL@cc.usu.edu>
Date: Tue, 22 Oct 2002 13:29:04 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104059-2002.10.22-15.12.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I was just adding proof to the theory of the infiniteness of human stupidity.
Turned the schematic around and rewired the jumpers. That helped.

>===== Original Message From TAPR PIC Development Special Interest Group
<picsig@lists.tapr.org> =====
>TAPR PIC Development Special Interest Group Digest for Saturday, October 19,
2002.
>
>1. Re: Loss of audio signal when radio is connected
>
>--
>
>Subject: Re: Loss of audio signal when radio is connected
>From: Steve Slay <snslay@swbell.net>
>Date: Sat, 19 Oct 2002 06:34:12 -0500
>X-Message-Number: 1
>
>Reverse polarity?
>
>Steve Slay
>KC5MVY
>Where am I now? http://www.findu.com/cgi-bin/find.cgi?call=KC5MVY
>Where have I been lately?
>http://www.findu.com/cgi-bin/track.cgi?call=KC5MVY
>With weather RADAR
>http://www.findu.com/cgi-bin/find.cgi?call=KC5MVY&radar=LBB
>
>"Only two things are infinite, the universe and human stupidity, and I'm not
>sure about the former."   Albert Einstein
>
>----- Original Message -----
>From: "MTWAL" <MTWAL@cc.usu.edu>
>To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
>Sent: Friday, October 18, 2002 4:55 PM
>Subject: [picsig] Loss of audio signal when radio is connected
>
>
>> I am connecting the PIC-E to a business band radio. When running the
>> diagnostic software with the radio disconnected and using an oscilloscope
>to
>> look at the TXOUT signal we have a nice waveform. When the radio is
>connected
>> we lose the waveform at the capacitor C2. It is on the modem side of the
>> capacitor, but at the radio side there is no signal. I would greatly
>> appreciate any suggestions.
>>
>> Thanks,
>>
>> Matt
>>
>> Matt Waldron
>> 245-2761
>> mtwal@cc.usu.edu
>>
>>
>> ---
>> You are currently subscribed to picsig as: snslay@swbell.net
>> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>>
>
>
>
>
>---
>
>END OF DIGEST
>
>---
>You are currently subscribed to picsig as: mtwal@cc.usu.edu
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

Matt Waldron
245-2761
mtwal@cc.usu.edu

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

34. [picsig] RE: Pic e

From: John Morley <jmorley@endeavour-usa.com>
Date: Wed, 23 Oct 2002 08:02:20 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104167-2002.10.23-07.45.14--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rich,

Good News! I have received the first batch of PIC-E-II PCB's! I will be
putting the
kits and documentation together over the next week or so. I do have a
couple of questions
regarding a few of the parts we're going to use: Which version of the PIC
do we need, the
"non-A" or the "A" version? Do you have a source for the FRAM chips? Do you
have a source
for the MX614 chips??

Thanks,

John Morley

At 03:02 PM 10/7/2002 -0400, you wrote:
>I don't have an ETA yet. I'm hoping to have beta kits available before xmas.
>These kits would have functional hardware, but the software will not be
>completely tested. Beta kits would be useful for people doing their own
>software or those who want to help test the application under development.
>
>Rich Carter
>Wind River Systems
>10 Tara Blvd SWT 330
>Nashua NH 03062
>603-897-2071
>
>
> > -----Original Message-----
> > From: bounce-picsig-21297@lists.tapr.org
> > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andreas Junge -
> > DSLX
> > Sent: Monday, October 07, 2002 1:35 PM
> > To: TAPR PIC Development Special Interest Group
> > Subject: [picsig] RE: Pic e
> >
> >
> > >
> > > Actually, the PIC-E has more functionality then the TINI-Trak 2. The
> > > TinyTrack 2 does a specific job alot better, the PIC-E is a more general
> > > purpose tool.
> > >
> >
> > Agreed, it is versatile/multi porpose.
> >
> > BTW is there an ETA on the PIC E II?
> >
> > Now that would be a good platform for developments ...
> >
> > Andreas, N6NU
> >
> > ---
> > You are currently subscribed to picsig as: KE1EV@ARRL.net
> > To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
> >
>
>
>---
>You are currently subscribed to picsig as: jmorley@endeavour-usa.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

35. [picsig] RE: Pic e

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Wed, 23 Oct 2002 09:27:03 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104178-2002.10.23-09.03.24--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Great! Winter is fast approaching. It is snowing as I speak. I should have time to work on the pic project now. When do you expect to have kits ready for us? How many are you kitting?

Parts source. Steven Bible got the parts for our first kit. Please consult him regarding where and how to get parts. I assume that TAPR is reembursing you for the cost of the boards and parts. Also please discuss volume purchases. Many of these chips have price breaks at 25 or 50 parts.

I'll send you a hex file so that you can play with your board once you put it together. Do you have an ICD to program it?

As for part number. I don't know what the difference between the '876 and '876A chip are. I assume that they fixed some errata problems in the old chip mask. The '876A chip is less expensive. Please order the newer chip. Make sure that you get the 20mhz part please.

I have a bad '876 on my ICD. When you do the kitting, please drop an extra PIC chip in my bag.

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> Sent: Wednesday, October 23, 2002 8:02 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Pic e
>
>
> Rich,
>
> Good News! I have received the first batch of PIC-E-II PCB's! I will be
> putting the
> kits and documentation together over the next week or so. I do have a
> couple of questions
> regarding a few of the parts we're going to use: Which version of the PIC
> do we need, the
> "non-A" or the "A" version? Do you have a source for the FRAM chips? Do you
> have a source
> for the MX614 chips??
>
> Thanks,
>
> John Morley
>
>
> At 03:02 PM 10/7/2002 -0400, you wrote:
> >I don't have an ETA yet. I'm hoping to have beta kits available before xmas.
> >These kits would have functional hardware, but the software will not be
> >completely tested. Beta kits would be useful for people doing their own
> >software or those who want to help test the application under development.
> >
> >Rich Carter
> >Wind River Systems
> >10 Tara Blvd SWT 330
> >Nashua NH 03062
> >603-897-2071
> >
> >
> > > -----Original Message-----
> > > From: bounce-picsig-21297@lists.tapr.org
> > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andreas Junge -

> > > DSLX
> > > Sent: Monday, October 07, 2002 1:35 PM
> > > To: TAPR PIC Development Special Interest Group
> > > Subject: [picsig] RE: Pic e
> > >
> > >
> > > >
> > > > Actually, the PIC-E has more functionality then the TINI-Trak 2. The
> > > > TinyTrack 2 does a specific job alot better, the PIC-E is a more general
> > > > purpose tool.
> > > >
> > >
> > > Agreed, it is versatile/multi porpose.
> > >
> > > BTW is there an ETA on the PIC E II?
> > >
> > > Now that would be a good platform for developments ...
> > >
> > > Andreas, N6NU
> > >
> > > ---
> > > You are currently subscribed to picsig as: KE1EV@ARRL.net
> > > To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
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> You are currently subscribed to picsig as: KE1EV@ARRL.net
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>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

36. [picsig] RE: Pic e

From: Jeff King <jeff@aerodata.net>
Date: Wed, 23 Oct 2002 11:19:26 -0500 (CDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104185-2002.10.23-12.02.20--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Quoting Rich Carter - KE1EV <ke1ev@arrl.net>:

> As for part number. I don't know what the difference between the '876
> and '876A chip are.

Big difference is the A part has a comparator in it similar to the 16C62x
series. Also the programmable Vref.

-Jeff

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

37. [picsig] RE: Pic e

From: "Byon Garrabrant" <byon@byon.com>
Date: Wed, 23 Oct 2002 09:48:48 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104188-2002.10.23-12.31.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 23 Oct 2002 at 11:19, Jeff King wrote:

> Quoting Rich Carter - KE1EV <ke1ev@arrl.net>:
>
> > As for part number. I don't know what the difference between the
> > '876 and '876A chip are.
>
> Big difference is the A part has a comparator in it similar to the

> 16C62x series. Also the programmable Vref.
>

I found that the 876A chips are cheaper, but cannot be in circuit
progrmmed like the 876 chips can. I checked the documentation and
found the one of the differences between the two was ICSP, but I
couldn't find further details. Anyone know more about this?

Byon

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

38. [picsig] RE: Pic e

From: John Hansen <hansen@fredonia.edu>
Date: Wed, 23 Oct 2002 13:10:31 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104191-2002.10.23-12.56.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 08:02 AM 10/23/2002 -0400, John Morley wrote:
> Do you have a source for the FRAM chips?

FRAM is available from Future Active (www.future-active.com).

> Do you have a source
>for the MX614 chips??

I just bought some from component distributors (www.compdist.com)

This probably won't effect you, but the last time I bought MX-614's was a
couple of years ago when the company was still MX-COM. The new batch I
just received are from CML. There appears to be a subtle design change in
the chip. This probably won't effect you, but the PIC TNC that I did
relied on a quirk in the chip that sent out random flag characters fairly
frequently even when no audio was applied. The new chips do the same
thing, but much less frequently and there appears to be some serial
correlation in the data sent that comes out. As a result, you can go for
several seconds without any random flags showing up. In my original
design, I waited for a flag before kicking off the data transmit routine
(if there was buffered data to transmit). Thus with the new chip I would
sometimes have a delay of several seconds between the time I hit the
carriage return on the keyboard and when the data was transmitted (even
when the radio channel was not in use). As a result I had to redesign my
code somewhat to take this into account. Casual users of this chip will
probably not be effected unless they use the source code I published for
that project.

John W2FS

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

39. [picsig] RE: Pic e

From: Jeff King <jeff@aerodata.net>
Date: Wed, 23 Oct 2002 12:31:25 -0500 (CDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104195-2002.10.23-13.14.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Quoting Byon Garrabrant <byon@byon.com>:

> On 23 Oct 2002 at 11:19, Jeff King wrote:
>
> > Quoting Rich Carter - KE1EV <ke1ev@arrl.net>:
> >
> > > As for part number. I don't know what the difference between the
> > > '876 and '876A chip are.
> >
> > Big difference is the A part has a comparator in it similar to the
> > 16C62x series. Also the programmable Vref.
> >
>

> I found that the 876A chips are cheaper, but cannot be in circuit
> progrmmed like the 876 chips can. I checked the documentation and
> found the one of the differences between the two was ICSP, but I
> couldn't find further details.

Where did you find that it couldn't do ICSP? My databook on the A part clearly
shows it can do ICSP. I've not yet replaced my 87x part with a 87xA, so I'm not
speaking from experince, but IMHO I highly doubt what you are saying is true
(in that Microchip deleted ICSP from the spec).

Now, if your saying that *your* icsp no longer works, I can believe this.
Typically the "A" series is a die shrink and you get differences in the voltage
specs. I've had this bite me before on a die shrink on the 16c621 part. Look at
the back of your datasheet... all the voltage/timing specs are there and if you
follow them, things should work.

-Jeff

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

40. [picsig] RE: Pic e

From: "Byon Garrabrant" <byon@byon.com>
Date: Wed, 23 Oct 2002 14:46:39 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104211-2002.10.23-17.29.37--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 23 Oct 2002 at 12:31, Jeff King wrote:

> Quoting Byon Garrabrant <byon@byon.com>:
>
> > I found that the 876A chips are cheaper, but cannot be in circuit
> > progrmmed like the 876 chips can. I checked the documentation and
> > found the one of the differences between the two was ICSP, but I
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> Now, if your saying that *your* icsp no longer works, I can believe
> this. Typically the "A" series is a die shrink and you get differences
> in the voltage specs. I've had this bite me before on a die shrink on
> the 16c621 part. Look at the back of your datasheet... all the
> voltage/timing specs are there and if you follow them, things should
> work.

I'm sure the 876As can be ICSPed, but not with FPP and my Tait
parallel port programmer, which does works on the 876. The 876 ->
876A migration document says that there is a difference between the
two WRT ICSP, but I have not found what the acutal difference is.

Byon

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

41. [picsig] Re: picsig digest: October 23, 2002

From: "J.P. Rouland" <jprouland@attbi.com>
Date: Thu, 24 Oct 2002 07:34:49 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104299-2002.10.24-10.18.32--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm just an amateur, lurking on the list, but have played
with APRS, and would be interested to get one of the kits.
May I ask to be notified when the kits are available to "the
general public"?
And, quantity-wise, may I be counted as a firm buyer for 1 (
sure), or 2 (probable) kits?
I'm good in the call book.
Thanks in advance,

J.P. Rouland NQ6T, Fremont, CA
<jprouland@attbi.com>

TAPR PIC Development Special Interest Group digest wrote:
>
> TAPR PIC Development Special Interest Group Digest for Wednesday, October 23, 2002.
> (snip)

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

42. [picsig] Re: picsig digest: October 23, 2002

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Thu, 24 Oct 2002 14:28:26 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104319-2002.10.24-14.05.05--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Give a look on the TAPR web site around christmas time. I hope to have beta
kits available by then. Tested software will not be available for a few months.
I'll send out a notice to a few of the TAPR mailing lists when the kits are
available.

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of J.P. Rouland
> Sent: Thursday, October 24, 2002 10:35 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Re: picsig digest: October 23, 2002
>
>
> I'm just an amateur, lurking on the list, but have played
> with APRS, and would be interested to get one of the kits.
> May I ask to be notified when the kits are available to "the
> general public"?
> And, quantity-wise, may I be counted as a firm buyer for 1 (
> sure), or 2 (probable) kits?
> I'm good in the call book.
> Thanks in advance,
> J.P. Rouland NQ6T, Fremont, CA
> <jprouland@attbi.com>
>
> TAPR PIC Development Special Interest Group digest wrote:
> >
> > TAPR PIC Development Special Interest Group Digest for Wednesday,
> October 23, 2002.
> > (snip)
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

43. [picsig] Re: picsig digest: October 23, 2002

From: "Robert Donnell" <bobdonnell@arkalmus.com>
Date: Thu, 24 Oct 2002 11:54:31 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104321-2002.10.24-14.37.40--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

It would also seem reasonable that an annoucement would be made here, and
since you're already subscribed...

73, Bob, KD7NM

-----Original Message-----
From: bounce-picsig-17770@lists.tapr.org
[mailto:bounce-picsig-17770@lists.tapr.org]On Behalf Of J.P. Rouland
Sent: Thursday, October 24, 2002 7:35 AM
To: TAPR PIC Development Special Interest Group

Subject: [picsig] Re: picsig digest: October 23, 2002

I'm just an amateur, lurking on the list, but have played
with APRS, and would be interested to get one of the kits.
May I ask to be notified when the kits are available to "the
general public"?
And, quantity-wise, may I be counted as a firm buyer for 1 (
sure), or 2 (probable) kits?
I'm good in the call book.
Thanks in advance,
J.P. Rouland NQ6T, Fremont, CA
<jprouland@attbi.com>

TAPR PIC Development Special Interest Group digest wrote:
>
> TAPR PIC Development Special Interest Group Digest for Wednesday, October
23, 2002.
> (snip)

You are currently subscribed to picsig as: kd7nm@pugetsound.net
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

44. [picsig] RE: Pic e

From: John Morley <jmorley@endeavour-usa.com>
Date: Fri, 25 Oct 2002 08:26:36 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104401-2002.10.25-08.09.43--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rich,

I think I have all the parts information I need now. I'm doing an initial
run of 5 kits
to verify the design of the PCB. The first boards are prototype quality
with no soldermask
or silkscreen. Once verified, we can decide on a more extensive run of
boards. I'm leaving
for Germany on Sunday for a week. I should have all the parts when I
return, and I can send
the kits out then.....

Thanks,

John Morley

  At 09:27 AM 10/23/2002 -0400, you wrote:
>Great! Winter is fast approaching. It is snowing as I speak. I should have
>time to work on the pic project now. When do you expect to have kits
>ready for
>us? How many are you kitting?
>
>Parts source. Steven Bible got the parts for our first kit. Please
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>regarding where and how to get parts. I assume that TAPR is reembursing
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>the cost of the boards and parts. Also please discuss volume purchases. Many
>of these chips have price breaks at 25 or 50 parts.
>
>I'll send you a hex file so that you can play with your board once you put it
>together. Do you have an ICD to program it?
>
>As for part number. I don't know what the difference between the '876 and
>'876A
>chip are. I assume that they fixed some errata problems in the old chip mask.
>The '876A chip is less expensive. Please order the newer chip. Make sure
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>you get the 20mhz part please.
>
>I have a bad '876 on my ICD. When you do the kitting, please drop an
>extra PIC
>chip in my bag.
>
>Rich Carter
>KE1EV
>
> > -----Original Message-----

> > From: bounce-picsig-21297@lists.tapr.org
> > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> > Sent: Wednesday, October 23, 2002 8:02 AM
> > To: TAPR PIC Development Special Interest Group
> > Subject: [picsig] RE: Pic e
> >
> >
> > Rich,
> >
> > Good News! I have received the first batch of PIC-E-II PCB's! I will be
> > putting the
> > kits and documentation together over the next week or so. I do have a
> > couple of questions
> > regarding a few of the parts we're going to use: Which version of the PIC
> > do we need, the
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> > have a source
> > for the MX614 chips??
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> > Thanks,
> >
> > John Morley
> >
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> > At 03:02 PM 10/7/2002 -0400, you wrote:
> > >I don't have an ETA yet. I'm hoping to have beta kits available
> before xmas.
> > >These kits would have functional hardware, but the software will not be
> > >completely tested. Beta kits would be useful for people doing their own
> > >software or those who want to help test the application under development.
> > >
> > >Rich Carter
> > >Wind River Systems
> > >10 Tara Blvd SWT 330
> > >Nashua NH 03062
> > >603-897-2071
> > >
> > >
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> > > > From: bounce-picsig-21297@lists.tapr.org
> > > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andreas Junge -
> > > > DSLX
> > > > Sent: Monday, October 07, 2002 1:35 PM
> > > > To: TAPR PIC Development Special Interest Group
> > > > Subject: [picsig] RE: Pic e
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> > > >
> > > >
> > > > Actually, the PIC-E has more functionality then the TINI-Trak 2. The
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> > > > You are currently subscribed to picsig as: KE1EV@ARRL.net
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> > > >
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---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

45. [picsig] RE: Pic e

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Fri, 25 Oct 2002 10:31:38 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104413-2002.10.25-10.08.08--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Do you need a hex file for your PIC? If you don't have a way to load your PIC,
I can load it for you.

Rich Carter
Wind River Systems
10 Tara Blvd SWT 330
Nashua NH 03062
603-897-2071

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> Sent: Friday, October 25, 2002 8:27 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Pic e
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> >
> >Rich Carter
> >KE1EV
> >
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> > > From: bounce-picsig-21297@lists.tapr.org
> > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> > > Sent: Wednesday, October 23, 2002 8:02 AM
> > > To: TAPR PIC Development Special Interest Group
> > > Subject: [picsig] RE: Pic e
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> > >
> > > At 03:02 PM 10/7/2002 -0400, you wrote:
> > > >I don't have an ETA yet. I'm hoping to have beta kits available
> > before xmas.
> > > >These kits would have functional hardware, but the software will not be
> > > >completely tested. Beta kits would be useful for people doing their own
> > > >software or those who want to help test the application under
> development.
> > > >
> > > >Rich Carter
> > > >Wind River Systems
> > > >10 Tara Blvd SWT 330
> > > >Nashua NH 03062
> > > >603-897-2071
> > > >
> > > >
> > > > > -----Original Message-----
> > > > > From: bounce-picsig-21297@lists.tapr.org
> > > > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of
> Andreas Junge -
> > > > > DSLX
> > > > > Sent: Monday, October 07, 2002 1:35 PM
> > > > > To: TAPR PIC Development Special Interest Group
> > > > > Subject: [picsig] RE: Pic e
> > > > >
> > > > >
> > > > >
> > > > > Actually, the PIC-E has more functionality then the TINI-Trak 2. The
> > > > > TinyTrack 2 does a specific job alot better, the PIC-E is a more
> > general
> > > > > purpose tool.
> > > > >
> > > > >
> > > > > Agreed, it is versatile/multi porpose.
> > > > >
> > > > > BTW is there an ETA on the PIC E II?
> > > > >
> > > > > Now that would be a good platform for developments ...
> > > > >
> > > > > Andreas, N6NU
> > > > >
> > > > > ---
> > > > > You are currently subscribed to picsig as: KE1EV@ARRL.net
> > > > > To unsubscribe send a blank email to
> leave-picsig-6890E@lists.tapr.org
> > > > >

> > > >
> > > >
> > > >---
> > > >You are currently subscribed to picsig as: jmorley@endeavour-usa.com
> > > >To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
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> > >
> > > ---
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> > > To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
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> >---
> >You are currently subscribed to picsig as: jmorley@endeavour-usa.com
> >To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
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>
>
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

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46. [picsig] ESD/Static problem with Microchip chips

From: "CHIGA" <nh7s@hawaii.rr.com>
Date: Fri, 25 Oct 2002 06:09:09 -1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104426-2002.10.25-11.55.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All,

    I've had some PIC16F874 fail on me, 4 out of 5. I suspect an ESD
(Electro Static Discharge) problem, I haven't been that careful with them.
I have not had any problems with PIC16F84 or PIC16F628 chips.

    Does anyone know if the PIC16F874 have a higher sensitivity to ESD?

    Would a windowed (EPROM/non-flash) device have higher immunity to ESD?

    TNX es 73
    Cal - NH7S.

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47. [picsig] Re: ESD/Static problem with Microchip chips

From: David VanHorn <dvanhorn@cedar.net>
Date: Fri, 25 Oct 2002 11:37:42 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104427-2002.10.25-12.20.05--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 06:09 AM 10/25/2002 -1000, CHIGA wrote:
>   Hi All,
>
>   I've had some PIC16F874 fail on me, 4 out of 5. I suspect an ESD (Electro Static Discharge)
problem, I haven't been that careful with them.
>I have not had any problems with PIC16F84 or PIC16F628 chips.

You're not using them to groom the cat are you? :)

Given your environment, I'd think it's pretty unlikely to damage them unless you have a lot of
static-friendly surfaces in your work area.

Are they dead-dead, or just not programmable.
In the pics, once you lock the program memory, you're locked out forever. In the AVRs, you can erase
the locked chip and reprogram, but not read locked code.

>   Does anyone know if the PIC16F874 have a higher sensitivity to ESD?
>
>   Would a windowed (EPROM/non-flash) device have higher immunity to ESD?

Shouldn't. Same die.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

48. [picsig] Re: ESD/Static problem with Microchip chips

From: Dan Welch <dan@byonics.com>
Date: Fri, 25 Oct 2002 09:47:26 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104428-2002.10.25-12.30.40--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If you are using in circuit programming beware that the 16F8xx and 16F8xxA
use different programming algorithms and are not directly interchangeable.

At 11:37 AM 10/25/02 -0500, you wrote:
>At 06:09 AM 10/25/2002 -1000, CHIGA wrote:
>>   Hi All,
>>
>>   I've had some PIC16F874 fail on me, 4 out of 5. I suspect an ESD
(Electro Static Discharge) problem, I haven't been that careful with them.
>>I have not had any problems with PIC16F84 or PIC16F628 chips.
>
>You're not using them to groom the cat are you? :)
>
>Given your environment, I'd think it's pretty unlikely to damage them
unless you have a lot of static-friendly surfaces in your work area.
>
>Are they dead-dead, or just not programmable.
>In the pics, once you lock the program memory, you're locked out forever.
In the AVRs, you can erase the locked chip and reprogram, but not read
locked code.
>
>>   Does anyone know if the PIC16F874 have a higher sensitivity to ESD?
>>
>>   Would a windowed (EPROM/non-flash) device have higher immunity to ESD?
>
>Shouldn't. Same die.
>
>
>---
>You are currently subscribed to picsig as: dan@byonics.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

 - Dan   Email: dan@byonics.com

See the GST-1 Converter for Earthmate GPS units at:
 http://www.byonics.com/gst-1

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

49. [picsig] Re: ESD/Static problem with Microchip chips

From: "CHIGA" <nh7s@hawaii.rr.com>
Date: Fri, 25 Oct 2002 07:12:05 -1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104429-2002.10.25-12.58.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Dave/Dan,

    Thanks for quick response.

    I've been using the Matrix development board and PICSTART. These use
the normal high voltage Vpp on the MCLR pin. Not the ICSP method.

    It could be the first three PIC16F874 that failed were code protected.
The last one that failed definitely is not as it can be re-programmed. Port

B pin 0 can't be controlled and is always high and it wasn't like this at
first.

    Guess it was just coincedence that the PIC16F874 would fail yet PIC16F84
and PIC16F628 didn't. I only had a total of 5 PIC16F874 compared to 8
PIC16F84 and just one PIC16F628 that I've used.

    73 - Cal, NH7S.

----- Original Message -----
From: "Dan Welch" <dan@byonics.com>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Friday, October 25, 2002 6:47 AM
Subject: [picsig] Re: ESD/Static problem with Microchip chips

> If you are using in circuit programming beware that the 16F8xx and 16F8xxA
> use different programming algorithms and are not directly interchangeable.
>
>

----- Original Message -----
From: "David VanHorn" <dvanhorn@cedar.net>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Friday, October 25, 2002 6:37 AM
Subject: [picsig] Re: ESD/Static problem with Microchip chips

> At 06:09 AM 10/25/2002 -1000, CHIGA wrote:
> >   Hi All,
> >
> >   I've had some PIC16F874 fail on me, 4 out of 5. I suspect an ESD
(Electro Static Discharge) problem, I haven't been that careful with them.
> >I have not had any problems with PIC16F84 or PIC16F628 chips.
>
> You're not using them to groom the cat are you? :)
>
> Given your environment, I'd think it's pretty unlikely to damage them
unless you have a lot of static-friendly surfaces in your work area.
>
> Are they dead-dead, or just not programmable.
> In the pics, once you lock the program memory, you're locked out forever.
In the AVRs, you can erase the locked chip and reprogram, but not read
locked code.
>
> >   Does anyone know if the PIC16F874 have a higher sensitivity to ESD?
> >
> >   Would a windowed (EPROM/non-flash) device have higher immunity to
ESD?
>
> Shouldn't. Same die.
>
>
> ---
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50. [picsig] Re: ESD/Static problem with Microchip chips

From: David VanHorn <dvanhorn@cedar.net>
Date: Fri, 25 Oct 2002 12:24:32 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104430-2002.10.25-13.06.58--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>   It could be the first three PIC16F874 that failed were code protected.
>The last one that failed definitely is not as it can be re-programmed. Port B pin 0 can't be
controlled and is always high and it wasn't like this at first.

Was B0 driving anything unusual? I've seen designs where uP pins were used to drive relays directly,
without protetion diodes, or high current/capacitive loads.

Could be ESD, but I don't think in the 15 years I was there, I ever saw a failure due to ESD, and we

were pretty casual about handling. Here, I have a lot less humidity, but I work on bare wood surfaces.

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51. [picsig] Re: ESD/Static problem with Microchip chips

From: James Jefferson <jjeffers@aprsworld.net>
Date: Fri, 25 Oct 2002 12:46:11 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104432-2002.10.25-13.26.11--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I had an interesting on here the other day. A PIC16F628 left the
"assembly-line" with B0 set as a high impedence input with a RC circuit for
debounce. I got a call from the customer saying that it didn't work. He did
some measurements and determined that B0 at ground potential and the RC
circuit was working as a voltage divider. I had him send the chip back and I
observed the same results - even though the code verified correctly.

So how did the chipped get fried in the mail?

My next revision will contain Maxim debounce chips which have 15kV ESD
protection on them...

-Jim KB0THN

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52. [picsig] Re: ESD/Static problem with Microchip chips

From: David VanHorn <dvanhorn@cedar.net>
Date: Fri, 25 Oct 2002 12:49:36 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104434-2002.10.25-13.33.16--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>So how did the chipped get fried in the mail?

I assume you mean that you sent the chip to the customer, not a whole system?

One easy way to fry a chip, is to plug it in.
When the chip contacts the system, any differential in voltage between the customer and the system will result in current through the first lead that touches the socket.

Protective measure, hold the metal case, or PCB ground first, then plug in the chip.

Also, was it mailed in proper ESD protection?

>My next revision will contain Maxim debounce chips which have 15kV ESD protection on them...

You may not need to pay protection money to the Maxim voodoo priests. Just using good design practice is enough.

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

53. [picsig] Re: ESD/Static problem with Microchip chips

From: James Jefferson <jjeffers@aprsworld.net>
Date: Fri, 25 Oct 2002 12:59:15 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104435-2002.10.25-13.39.09--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> I assume you mean that you sent the chip to the customer, not a whole
> system?

No, it was a whole board. (http://www.aprsworld.com/windspeed/). The chip was

socketed and the board was enclosed in an ESD bag inside a bubble-pak
enevelope. Sent it US mail.

> You may not need to pay protection money to the Maxim voodoo priests. Just
> using good design practice is enough.

I'm curious to hear your thoughts on Maxim's ESD protection. I don't remember
the part number off-hand, but it's a tiny little part (SOT-23?) that has a
debounce circuit and esd protection. At $0.80 it will work out to be cheaper
then two resistors and a capacitor and related soldering.

-Jim

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54. [picsig] Re: ESD/Static problem with Microchip chips

From: David VanHorn <dvanhorn@cedar.net>
Date: Fri, 25 Oct 2002 13:02:13 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104436-2002.10.25-13.45.09--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 12:59 PM 10/25/2002 -0500, James Jefferson wrote:
>> I assume you mean that you sent the chip to the customer, not a whole
>> system?
>
>No, it was a whole board. (http://www.aprsworld.com/windspeed/). The chip was
>socketed and the board was enclosed in an ESD bag inside a bubble-pak
>enevelope. Sent it US mail.
>
>> You may not need to pay protection money to the Maxim voodoo priests. Just
>> using good design practice is enough.
>
>I'm curious to hear your thoughts on Maxim's ESD protection. I don't remember the part number off-hand,
 but it's a tiny little part (SOT-23?) that has a debounce circuit and esd protection. At $0.80 it will
work out to be cheaper then two resistors and a capacitor and related soldering.

Where are you buying your parts?????
We pay about $0.001 per resistor, and maybe $0.01 per cap.

Debouncing is done in software, and minimal RC external.

For leads that might see ESD, I use a 1k series resistor, and 0.001uF to ground on the inside (between R
 and chip). Total cost, $0.011

All component vendors exist to separate you from your money, but with most companies, you get something
in exchange that you can't easily do on your own.

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55. [picsig] Re: ESD/Static problem with Microchip chips

From: David VanHorn <dvanhorn@cedar.net>
Date: Fri, 25 Oct 2002 13:06:01 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104437-2002.10.25-13.48.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 12:59 PM 10/25/2002 -0500, James Jefferson wrote:
>> I assume you mean that you sent the chip to the customer, not a whole
>> system?
>
>No, it was a whole board. (http://www.aprsworld.com/windspeed/).

Your pictures are too small to tell anything about the layout by.

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56. [picsig] Re: ESD/Static problem with Microchip chips

From: James Jefferson <jjeffers@aprsworld.net>
Date: Fri, 25 Oct 2002 13:40:00 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104438-2002.10.25-14.19.49--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Where are you buying your parts?????
> We pay about $0.001 per resistor, and maybe $0.01 per cap.

I'm doing very small quantities, so I pay a cent per resistor and $0.05 cents
for a 0.1uF cap. So there's $0.07 in the debounce circuit.

Schematic is here:
http://www.aprsworld.com/windspeed/technical/schematic-1b.pdf

I'm doing hardware debounce because at most I'll sell 500 of these things, and
the extra parts cost are less then the time it would take to get software
debounce integrated and tested.

Some form of protection is needed because the circuit interfaces to an
anemometer which is likely situated 30 feet up, 500 feet away from the
closest surronding, and on a long length of wire. I recommend to the customer
that they either have the circuit run on it's own batteries and/or employee
external lightning protection.

That part I am considering is a MAX6816:
http://www.maxim-ic.com/quick_view2.cfm?qv_pk=1896

Now 500 x $0.99 = $500 could afford me some more engineering time to save
costs. That's where I am. Open to any suggestions.

-Jim KB0THN

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

57. [picsig] Re: ESD/Static problem with Microchip chips

From: David VanHorn <dvanhorn@cedar.net>
Date: Fri, 25 Oct 2002 14:06:03 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104440-2002.10.25-14.48.26--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 01:40 PM 10/25/2002 -0500, James Jefferson wrote:
>> Where are you buying your parts?????
>> We pay about $0.001 per resistor, and maybe $0.01 per cap.
>
>I'm doing very small quantities, so I pay a cent per resistor and $0.05 cents
>for a 0.1uF cap. So there's $0.07 in the debounce circuit.
>
>Schematic is here:
>http://www.aprsworld.com/windspeed/technical/schematic-1b.pdf
>
>I'm doing hardware debounce because at most I'll sell 500 of these things, and the extra parts cost are
 less then the time it would take to get software debounce integrated and tested.

'snot that hard. Just poll the inputs once a mS or so, and that's good enough. Switch bounce isn't much
 of a problem, and I imagine you're using reed relays, which have little to no bounce anyway.

On your temp and rain gauge inputs, I would add as much series resistance as you can tolerate. I don't
know what circuitry you've got out there, but it's basically got a straight path into the chip. The
anemometer input looks good.

Maybe add some neon lamps from the outside pins to ground. The neons will flash over at 55V, and you can
 probably set up enough resistance to survive that high/low of an input momentarily.

1N4148s to the supply rails on the inside of the resistors would help a lot. Using the chip's diodes is
generally a no-no.

>That part I am considering is a MAX6816:
>http://www.maxim-ic.com/quick_view2.cfm?qv_pk=1896

It's not doing anything that you can't do cheaper.

>Now 500 x $0.99 = $500 could afford me some more engineering time to save costs. That's where I am.
Open to any suggestions.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

58. [picsig] Re: ESD/Static problem with Microchip chips

From: Jeff King <jeff@aerodata.net>
Date: Fri, 25 Oct 2002 14:27:49 -0500 (CDT)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104444-2002.10.25-15.10.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Quoting David VanHorn <dvanhorn@cedar.net>:

> 1N4148s to the supply rails on the inside of the resistors would help a
> lot. Using the chip's diodes is generally a no-no.

Actually, there is a app note on this. I have a commerical product that depends
on the chip's diodes. I even think there is a spec on this. However, it is in
the uA's and unless you can carefully control what is feed into the PIC, I'd go
with your suggestion.

-Jeff

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

59. [picsig] Re: ESD/Static problem with Microchip chips

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Fri, 25 Oct 2002 15:50:51 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104445-2002.10.25-15.27.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Putting RC circuits on the PIC I/O pins won't guarantee that the chip doesn't
get damaged by ESD. I suppose that some protection is better than none. As
long as your paws can get in direct contact with the PIC pins, there is a chance
of a damaging discharge. I've had trouble with my ICD. The PIC on it got
damaged a couple of times by casual handling. Putting the ICD in a box seems to
help. The PIC-E-II will have a shielded enclosure.

Rich Carter
KE1EV

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

60. [picsig] Re: ESD/Static problem with Microchip chips

From: David VanHorn <dvanhorn@cedar.net>
Date: Fri, 25 Oct 2002 15:53:04 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104456-2002.10.25-16.35.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 03:50 PM 10/25/2002 -0400, Rich Carter - KE1EV wrote:
>Putting RC circuits on the PIC I/O pins won't guarantee that the chip doesn't get damaged by ESD.

There are no guarantees, but at any reasonable level, the resistor slows down the current, and the cap
gives it somewhere to go for a short time, till the protection diodes can turn on.

External diodes are better though.

If you saw my static tester, you'd be more confident in my methods. It's hot a schaffner gun, but it's
pretty effective.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

61. [picsig] RE: Pic e

From: John Morley <jmorley@endeavour-usa.com>
Date: Sun, 27 Oct 2002 19:28:44 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104626-2002.10.27-19.11.40--lyris.picsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

Rich,

I should be OK as I have a PICStart programmer and a PIC-ICD. I'll write a small piece of
code to checkout the board. I should be ready to send out the kits in a week or so.

Thanks,

John

At 10:31 AM 10/25/2002 -0400, you wrote:
>Do you need a hex file for your PIC? If you don't have a way to load your
>PIC,
>I can load it for you.
>
>Rich Carter
>Wind River Systems
>10 Tara Blvd SWT 330
>Nashua NH 03062
>603-897-2071
>
>
> > -----Original Message-----
> > From: bounce-picsig-21297@lists.tapr.org
> > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> > Sent: Friday, October 25, 2002 8:27 AM
> > To: TAPR PIC Development Special Interest Group
> > Subject: [picsig] RE: Pic e
> >
> >
> > Rich,
> >
> > I think I have all the parts information I need now. I'm doing an initial
> > run of 5 kits
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> > boards. I'm leaving
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> > the kits out then.....
> >
> > Thanks,
> >
> > John Morley
> >
> >
> >   At 09:27 AM 10/23/2002 -0400, you wrote:
> > >Great! Winter is fast approaching. It is snowing as I speak. I
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> > > >the cost of the boards and parts. Also please discuss volume
> > purchases. Many
> > > >of these chips have price breaks at 25 or 50 parts.
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> > > >I'll send you a hex file so that you can play with your board once you
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> > > >together. Do you have an ICD to program it?
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> > > >The '876A chip is less expensive. Please order the newer chip. Make sure
> > > >that
> > > >you get the 20mhz part please.
> > > >
> > > >I have a bad '876 on my ICD. When you do the kitting, please drop an
> > > >extra PIC

> > >chip in my bag.
> > >
> > >Rich Carter
> > >KE1EV
> > >
> > > > -----Original Message-----
> > > > From: bounce-picsig-21297@lists.tapr.org
> > > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> > > > Sent: Wednesday, October 23, 2002 8:02 AM
> > > > To: TAPR PIC Development Special Interest Group
> > > > Subject: [picsig] RE: Pic e
> > > > >
> > > > >
> > > > Rich,
> > > > >
> > > > Good News! I have received the first batch of PIC-E-II PCB's! I
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> > > > have a source
> > > > for the MX614 chips??
> > > > >
> > > > Thanks,
> > > > >
> > > > John Morley
> > > > >
> > > > >
> > > > At 03:02 PM 10/7/2002 -0400, you wrote:
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> > > > >These kits would have functional hardware, but the software will
> not be
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> their own
> > > > >software or those who want to help test the application under
> > development.
> > > > >
> > > > >Rich Carter
> > > > >Wind River Systems
> > > > >10 Tara Blvd SWT 330
> > > > >Nashua NH 03062
> > > > >603-897-2071
> > > > >
> > > > >
> > > > > > -----Original Message-----
> > > > > > From: bounce-picsig-21297@lists.tapr.org
> > > > > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of
> > Andreas Junge -
> > > > > > DSLX
> > > > > > Sent: Monday, October 07, 2002 1:35 PM
> > > > > > To: TAPR PIC Development Special Interest Group
> > > > > > Subject: [picsig] RE: Pic e
> > > > > >
> > > > > >
> > > > > >
> > > > > > Actually, the PIC-E has more functionality then the TINI-Trak
> 2. The
> > > > > > TinyTrack 2 does a specific job alot better, the PIC-E is a more
> > > general
> > > > > > purpose tool.
> > > > > >
> > > > > >
> > > > > > Agreed, it is versatile/multi porpose.
> > > > > >
> > > > > > BTW is there an ETA on the PIC E II?
> > > > > >
> > > > > > Now that would be a good platform for developments ...
> > > > > >
> > > > > > Andreas, N6NU
> > > > > >
> > > > > > ---
> > > > > > You are currently subscribed to picsig as: KE1EV@ARRL.net
> > > > > > To unsubscribe send a blank email to

> > leave-picsig-6890E@lists.tapr.org
> > > > > >
> > > > >
> > > > >
> > > > >---
> > > > >You are currently subscribed to picsig as: jmorley@endeavour-usa.com
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> leave-picsig-6890E@lists.tapr.org
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> > > >
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>
>
>---
>You are currently subscribed to picsig as: jmorley@endeavour-usa.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

62. [picsig] RE: Pic e

From: John Morley <jmorley@endeavour-usa.com>
Date: Fri, 25 Oct 2002 08:26:41 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104627-2002.10.27-19.12.04--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rich,

I think I have all the parts information I need now. I'm doing an initial
run of 5 kits
to verify the design of the PCB. The first boards are prototype quality
with no soldermask
or silkscreen. Once verified, we can decide on a more extensive run of
boards. I'm leaving
for Germany on Sunday for a week. I should have all the parts when I
return, and I can send
the kits out then.....

Thanks,

John Morley

  At 09:27 AM 10/23/2002 -0400, you wrote:
>Great! Winter is fast approaching. It is snowing as I speak. I should have
>time to work on the pic project now. When do you expect to have kits
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>us? How many are you kitting?
>
>Parts source. Steven Bible got the parts for our first kit. Please
>consult him
>regarding where and how to get parts. I assume that TAPR is reembursing
>you for
>the cost of the boards and parts. Also please discuss volume purchases. Many
>of these chips have price breaks at 25 or 50 parts.
>

>I'll send you a hex file so that you can play with your board once you put it
>together. Do you have an ICD to program it?
>
>As for part number. I don't know what the difference between the '876 and
>'876A
>chip are. I assume that they fixed some errata problems in the old chip mask.
>The '876A chip is less expensive. Please order the newer chip. Make sure
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>you get the 20mhz part please.
>
>I have a bad '876 on my ICD. When you do the kitting, please drop an
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>chip in my bag.
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>Rich Carter
>KE1EV
>
> > -----Original Message-----
> > From: bounce-picsig-21297@lists.tapr.org
> > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> > Sent: Wednesday, October 23, 2002 8:02 AM
> > To: TAPR PIC Development Special Interest Group
> > Subject: [picsig] RE: Pic e
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> >
> > Rich,
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> > Good News! I have received the first batch of PIC-E-II PCB's! I will be
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> > "non-A" or the "A" version? Do you have a source for the FRAM chips? Do you
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> > >Rich Carter
> > >Wind River Systems
> > >10 Tara Blvd SWT 330
> > >Nashua NH 03062
> > >603-897-2071
> > >
> > >
> > > -----Original Message-----
> > > From: bounce-picsig-21297@lists.tapr.org
> > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andreas Junge -
> > > DSLX
> > > Sent: Monday, October 07, 2002 1:35 PM
> > > To: TAPR PIC Development Special Interest Group
> > > Subject: [picsig] RE: Pic e
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> > >
> > >
> > > Actually, the PIC-E has more functionality then the TINI-Trak 2. The
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> > > >
> > > > ---
> > > > You are currently subscribed to picsig as: KE1EV@ARRL.net
> > > > To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
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> > > >
> > > >
> > > >---
> > > >You are currently subscribed to picsig as: jmorley@endeavour-usa.com
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You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

63. [picsig] Garmin GPWML...

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Mon, 28 Oct 2002 19:33:21 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104646-2002.10.28-03.17.05--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

People

This is not really one for here, but not one for APRSsig either. I want
to update a waypoint on a Garmin GPS reciever, with GPWML... But is
there any way to change the icon displayed?

Many thanks

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

64. [picsig] RE: Pic e

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Mon, 28 Oct 2002 09:06:40 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104669-2002.10.28-08.43.20--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

John
Do you have a copy of the CCS compiler too?

Rich

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> Sent: Sunday, October 27, 2002 7:29 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] RE: Pic e
>
>

> Rich,
>
> I should be OK as I have a PICStart programmer and a PIC-ICD. I'll write a
> small piece of
> code to checkout the board. I should be ready to send out the kits in a
> week or so.
>
> Thanks,
>
> John
>
>
> At 10:31 AM 10/25/2002 -0400, you wrote:
> >Do you need a hex file for your PIC? If you don't have a way to load your
> >PIC,
> >I can load it for you.
> >
> >Rich Carter
> >Wind River Systems
> >10 Tara Blvd SWT 330
> >Nashua NH 03062
> >603-897-2071
> >
> >
> > > -----Original Message-----
> > > From: bounce-picsig-21297@lists.tapr.org
> > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> > > Sent: Friday, October 25, 2002 8:27 AM
> > > To: TAPR PIC Development Special Interest Group
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> > > > > John Morley
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> > > > > >Rich Carter
> > > > > >Wind River Systems
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> > > > > >603-897-2071
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> > > > > >
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> > > > > > > From: bounce-picsig-21297@lists.tapr.org
> > > > > > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of
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> > > > > > > DSLX
> > > > > > > Sent: Monday, October 07, 2002 1:35 PM
> > > > > > > To: TAPR PIC Development Special Interest Group
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> > > > > > > Now that would be a good platform for developments ...
> > > > > > >
> > > > > > > Andreas, N6NU
> > > > > > >
> > > > > > > ---
> > > > > > > You are currently subscribed to picsig as: KE1EV@ARRL.net

> > > > > > > To unsubscribe send a blank email to
> > > leave-picsig-6890E@lists.tapr.org
> > > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >---
> > > > > > >You are currently subscribed to picsig as: jmorley@endeavour-usa.com
> > > > > > >To unsubscribe send a blank email to
> > > leave-picsig-6890E@lists.tapr.org
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You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

65. [picsig] Re: Garmin GPWML...

From: "Jason Rausch" <ke4nyv@msn.com>
Date: Mon, 28 Oct 2002 13:50:28 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104690-2002.10.28-13.33.43--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/html

I have a program that I wrote back a few months ago on my site to format and send the $GPWPL string to a Garmin unit. It's at www.ke4nyv.com <http://www.ke4nyv.com> under the My Software section. I was trying to figure out a way to manipulate the icons as well. So far I can not find where this was put into the string's format. All of my units just respond by using a small, black, square for the icon of the waypoint transferred over.

73's

Jason KE4NYV

www.ke4nyv.com

>From: "Darryl Smith"

>Reply-To: "TAPR PIC Development Special Interest Group"

>To: "TAPR PIC Development Special Interest Group"

>Subject: [picsig] Garmin GPWML...

>Date: Mon, 28 Oct 2002 19:33:21 +1100

>

>People

>

>This is not really one for here, but not one for APRSsig either. I want

>to update a waypoint on a Garmin GPS reciever, with GPWML... But is

>there any way to change the icon displayed?

>

>Many thanks

>

>Darryl

>

>---------

>Darryl Smith, VK2TDS POBox 169 Ingleburn NSW 2565 Australia

>Mobile Number 0412 929 634 [+61 4 12 929 634 International]

>Darryl@radio-active.net.au | www.radio-active.net.au

>

>

>

>---

>You are currently subscribed to picsig as: KE4NYV@msn.com

>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

Surf the Web without missing calls!□Get MSN Broadband. Click Here <http://g.msn.com/8HMWEN/2023>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

66. [picsig] Re: Garmin GPWML...

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Mon, 28 Oct 2002 14:48:00 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-104697-2002.10.28-14.24.48--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

There is no way to select an icon using WPL. Icons are a GUI thing.
NMEA-183 was written without any thought to this kind of operator interface.
The WPL sentence format doesn't have any support for this kind of concept.
In fact, it was designed with the intention of providing support for
numbered waypoints, not names. It turns out that most equipment uses
strings for waypoints instead of sequential numbers. Some older equipment
will not accept alpa strings in that sentece, so you can't display
callsigns. It seems that the entire concept of waypoints is being avoided
by some new equipment manufacturers. I just upgraded my Delorme Street
Atlas to a new version. Waypoints are not a feature. You can add map
notes, but not waypoints.

Garmin-Garmin protocol probably lets you select the icon. I don't have a
spec for it.

Rich Carter
KE1EV

 -----Original Message-----
From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Jason Rausch
Sent: Monday, October 28, 2002 1:50 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: Garmin GPWML...

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Jason KE4NYV

www.ke4nyv.com

>From: "Darryl Smith"
>Reply-To: "TAPR PIC Development Special Interest Group"
>To: "TAPR PIC Development Special Interest Group"
>Subject: [picsig] Garmin GPWML...
>Date: Mon, 28 Oct 2002 19:33:21 +1100
>
>People
>
>This is not really one for here, but not one for APRSsig either. I want
>to update a waypoint on a Garmin GPS reciever, with GPWML... But is
>there any way to change the icon displayed?
>
>Many thanks
>
>Darryl
>
>---------
>Darryl Smith, VK2TDS POBox 169 Ingleburn NSW 2565 Australia
>Mobile Number 0412 929 634 [+61 4 12 929 634 International]
>Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
>---
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---
--
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67. [picsig] RE: Pic e

From: John Morley <jmorley@endeavour-usa.com>
Date: Thu, 31 Oct 2002 21:40:30 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105172-2002.10.31-21.23.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rich,

Yes, I have a recent copy of the PCM compiler.

John

At 09:06 AM 10/28/2002 -0500, you wrote:
>John
>Do you have a copy of the CCS compiler too?
>
>Rich
>
> > -----Original Message-----
> > From: bounce-picsig-21297@lists.tapr.org
> > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> > Sent: Sunday, October 27, 2002 7:29 PM
> > To: TAPR PIC Development Special Interest Group
> > Subject: [picsig] RE: Pic e
> >
> >

> > Rich,
> >
> > I should be OK as I have a PICStart programmer and a PIC-ICD. I'll write a
> > small piece of
> > code to checkout the board. I should be ready to send out the kits in a
> > week or so.
> >
> > Thanks,
> >
> > John
> >
> >
> > At 10:31 AM 10/25/2002 -0400, you wrote:
> > >Do you need a hex file for your PIC? If you don't have a way to load your
> > >PIC,
> > >I can load it for you.
> > >
> > >Rich Carter
> > >Wind River Systems
> > >10 Tara Blvd SWT 330
> > >Nashua NH 03062
> > >603-897-2071
> > >
> > >
> > > > -----Original Message-----
> > > > From: bounce-picsig-21297@lists.tapr.org
> > > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> > > > Sent: Friday, October 25, 2002 8:27 AM
> > > > To: TAPR PIC Development Special Interest Group
> > > > Subject: [picsig] RE: Pic e
> > > >
> > > >
> > > > Rich,
> > > >
> > > > I think I have all the parts information I need now. I'm doing an
> initial
> > > > run of 5 kits
> > > > to verify the design of the PCB. The first boards are prototype quality
> > > > with no soldermask
> > > > or silkscreen. Once verified, we can decide on a more extensive run of
> > > > boards. I'm leaving
> > > > for Germany on Sunday for a week. I should have all the parts when I
> > > > return, and I can send
> > > > the kits out then.....
> > > >
> > > > Thanks,
> > > >
> > > > John Morley
> > > >
> > > >
> > > >   At 09:27 AM 10/23/2002 -0400, you wrote:
> > > > >Great! Winter is fast approaching. It is snowing as I speak. I
> > > should have
> > > > >time to work on the pic project now. When do you expect to have kits
> > > > >ready for
> > > > >us? How many are you kitting?
> > > > >
> > > > >Parts source. Steven Bible got the parts for our first kit. Please
> > > > >consult him
> > > > >regarding where and how to get parts. I assume that TAPR is
> reembursing
> > > > >you for
> > > > >the cost of the boards and parts. Also please discuss volume
> > > > purchases. Many
> > > > >of these chips have price breaks at 25 or 50 parts.
> > > > >
> > > > >I'll send you a hex file so that you can play with your board once you
> > > put it
> > > > >together. Do you have an ICD to program it?
> > > > >
> > > > >As for part number. I don't know what the difference between
> > the '876 and
> > > > >'876A
> > > > >chip are. I assume that they fixed some errata problems in the old
> > > > chip mask.
> > > > >The '876A chip is less expensive. Please order the newer chip.
> > Make sure
> > > > >that
> > > > >you get the 20mhz part please.

> > > > >
> > > > >I have a bad '876 on my ICD. When you do the kitting, please drop an
> > > > >extra PIC
> > > > >chip in my bag.
> > > > >
> > > > >Rich Carter
> > > > >KE1EV
> > > > >
> > > > > > -----Original Message-----
> > > > > > From: bounce-picsig-21297@lists.tapr.org
> > > > > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> > > > > > Sent: Wednesday, October 23, 2002 8:02 AM
> > > > > > To: TAPR PIC Development Special Interest Group
> > > > > > Subject: [picsig] RE: Pic e
> > > > > >
> > > > > >
> > > > > > Rich,
> > > > > >
> > > > > > Good News! I have received the first batch of PIC-E-II PCB's! I
> > > will be
> > > > > > putting the
> > > > > > kits and documentation together over the next week or so. I do
> have a
> > > > > > couple of questions
> > > > > > regarding a few of the parts we're going to use: Which version of
> > > the PIC
> > > > > > do we need, the
> > > > > > "non-A" or the "A" version? Do you have a source for the FRAM
> > > chips? Do you
> > > > > > have a source
> > > > > > for the MX614 chips??
> > > > > >
> > > > > > Thanks,
> > > > > >
> > > > > > John Morley
> > > > > >
> > > > > >
> > > > > > At 03:02 PM 10/7/2002 -0400, you wrote:
> > > > > > >I don't have an ETA yet. I'm hoping to have beta kits available
> > > > > before xmas.
> > > > > > >These kits would have functional hardware, but the software will
> > > not be
> > > > > > >completely tested. Beta kits would be useful for people doing
> > > their own
> > > > > > >software or those who want to help test the application under
> > > > > development.
> > > > > > >
> > > > > > >Rich Carter
> > > > > > >Wind River Systems
> > > > > > >10 Tara Blvd SWT 330
> > > > > > >Nashua NH 03062
> > > > > > >603-897-2071
> > > > > > >
> > > > > > >
> > > > > > > > -----Original Message-----
> > > > > > > > From: bounce-picsig-21297@lists.tapr.org
> > > > > > > > [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of
> > > > > Andreas Junge -
> > > > > > > > DSLX
> > > > > > > > Sent: Monday, October 07, 2002 1:35 PM
> > > > > > > > To: TAPR PIC Development Special Interest Group
> > > > > > > > Subject: [picsig] RE: Pic e
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > Actually, the PIC-E has more functionality then the TINI-Trak
> > > 2. The
> > > > > > > > TinyTrack 2 does a specific job alot better, the PIC-E is
> a more
> > > > > general
> > > > > > > > purpose tool.
> > > > > > > >
> > > > > > > >
> > > > > > > > Agreed, it is versatile/multi porpose.
> > > > > > > >
> > > > > > > > BTW is there an ETA on the PIC E II?
> > > > > > > >
> > > > > > > > Now that would be a good platform for developments ...
> > > > > > > >

> > > > > > > > > Andreas, N6NU
> > > > > > > > > >
> > > > > > > > > > ---
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> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >---
> > > > > > > > >You are currently subscribed to picsig as:
> jmorley@endeavour-usa.com
> > > > > > > >To unsubscribe send a blank email to
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> > > > > > > >
> > > > > > > >
> > > > > > > >
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> > > > > > > > ---
> > > > > > > > You are currently subscribed to picsig as: KE1EV@ARRL.net
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> > > > > > >---
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> > > > > > ---
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> >---
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> >
>
>
>---
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---
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68. [picsig] DTMF receive code for the PIC

From: John Morley <jmorley@endeavour-usa.com>
Date: Thu, 31 Oct 2002 21:43:02 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105174-2002.10.31-21.26.24--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

I need to do a quick-n-dirty remote control project with the PIC and a DTMF
decoder IC (MT8870). I was wondering if anyone has a DTMF decoding routine in
CCS C that they'd be willing to share with me???

Thanks,

John

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

November 2002

Original source file: picsig.0211
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0211

1. [picsig] Re: DTMF receive code for the PIC

From: "HSHK" <hshk@ix.netcom.com>
Date: Fri, 1 Nov 2002 07:49:42 -0500 (Eastern Standard Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105217-2002.11.01-07.34.15--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have complete assembler code for an 8051 driven DTMF decoder/controller.

Presently, I use the Atmel 89S8252 because besides being in-circuit
programmable, it has 2K of on-board EEPROM where I keep
a customizeable command table and password and other
data.

I use the Holtek HT-9170 DTMF chip cause I haven't been
able to find the 8870 or older 202s anywhere for years and the
Holteks are easy to find.

The basic circuit and code have been modified for various
purposes such as select-call units for radios (like a pager..) for
remote command and control of balloons, repeater
controllers (simplex) and standard.

Your welcome to the base code.

I realize this is a PIC list, but thought I'd mention it.

73,

Bill KA8VIT

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Thursday, October 31, 2002 09:43:24 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] DTMF receive code for the PIC

Hi,

I need to do a quick-n-dirty remote control project with the PIC and a DTMF
decoder IC (MT8870). I was wondering if anyone has a DTMF decoding routine
in
CCS C that they'd be willing to share with me???

Thanks,

John

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

.

2. [picsig] Re: DTMF receive code for the PIC

From: John Hansen <hansen@fredonia.edu>
Date: Fri, 01 Nov 2002 09:15:49 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105229-2002.11.01-09.03.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This is really very easy. There is a pin on the 8870 that goes high when a
tone is being received (I believe it is pin 16, but I'd have to check the
datasheet). Hook this pin directly to pin RB0 (the external interrupt pin)
on the PIC. Then hook pins 11-14 on the 8870 to four pins on the PIC (in
the example below, I've used pins B4-B7). Then write an external interrupt
service routine that reads the port when B0 is raised:

#int_ext

```
ext_isr()
{
         working = input(pin_b7) + ( 2 * input(pin_b6)) +
          (4 * input(pin_b5)) + (8 * input(pin_b4));
}


The code corresponding to the dtmf tone will then be in the variable
working.  In order to use this routine you'll need to enable the external
interrupt and global interrupts:

ENABLE_INTERRUPTS(EXT_INT | GLOBAL);

That's all there is to it.

John W2FS


At 09:43 PM 10/31/2002 -0500, John Morley wrote:
>Hi,
>
>I need to do a quick-n-dirty remote control project with the PIC and a DTMF
>decoder IC (MT8870). I was wondering if anyone has a DTMF decoding routine in
>CCS C that they'd be willing to share with me???
>
>Thanks,
>
>John
>
>
>
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---
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```

3. [picsig] Getting started in the PIC...

```
From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sun, 3 Nov 2002 18:26:10 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105410-2002.11.03-02.09.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
People

I am after some advice... I want to start assembly language programming
on the PIC and need to learn the language... Can anyone suggest a DECENT
book on learning to program the darn things? I have PROGRAMMING AND
CUSTOMIZING PICmicro MICROCONTROLLERS by MYKE PREDKO, and the one thing
I can say about the 2nd edition is that it is twice the size of the
first... It is certainly not twice as as easy to understand... Exactly
the oposite...

Darryl

---------
Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au



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```

4. [picsig] Re: Getting started in the PIC...

```
From: "CHIGA" <nh7s@hawaii.rr.com>
Date: Sun, 3 Nov 2002 01:21:08 -1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105414-2002.11.03-06.08.04--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

Hi Darryl,

    I'm still digging into the first edition of "Programming and Customizing the PIC Microcontroller" by Predko, there is a lot of information even in about 1/2 (I think it's closer to 1/4) of the edition that you have. That's what I think the difficulty lies with getting into the PIC programming, too much information.

    My suggestion is just do a project and don't worry about all the information contained in a book. There are a lot of other books that can be suggested but I think you could just run into the same problem, that is, attempting to learn everything in a book and still be confused.

    Have you built the programmer suggested in the book? If not, you should get a programmer. Take a look at http://www.matrixmultimedia.co.uk/ I'm using their Version 2 board and have had some problems but overall, I can suggest it for learning about the PIC. They also have an assembler course and C programming course. I've used the C programming course and think it's basic and good. However, I am an experienced C and C++ programmer. If you've never programmed before, getting into assembler without knowing a higher level language or having an instructor can be very difficult (closer to impossible).

    Give us more information on where you're having problems learning about PICs. Another book or course could very well just add to the difficulty you're having. Have you programmed a PIC before or other microcontroller? Do you have any programming experience? Any hardware experience? Do know how to interface a LED to a PIC and have the PIC turn on the LED? If not, decide on a programmer to buy or development system and look into the TRISA, TRISB, PORTA and PORTB registers while you're waiting for your system. It sort like explaining how an internal combustion engine works then expecting one to drive a car. You need to get a PIC to do something in order to understand or "feel" how a PIC works.

    I have found over the years, people tend to look too deeply into subject when it comes to computers and microcontrollers. That is most can accept an AND or OR gate but then when it comes to the TRISA register, they ask why. No need to know why/how a TRISA register works the way it does, just know the you must set it (initialize) to a value in order to get PORTA to input or output. That's just an example (I haven't taught PIC programming).

    So I hope the above is of some usefulness to you, let us know where programming PIC assembly language is giving you some difficulty.

    73 and aloha from the mid-Pacific - Cal NH7S.

----- Original Message -----
From: "Darryl Smith" <Darryl@radio-active.net.au>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Saturday, November 02, 2002 9:26 PM
Subject: [picsig] Getting started in the PIC...

> People
>
> I am after some advice... I want to start assembly language programming
> on the PIC and need to learn the language... Can anyone suggest a DECENT
> book on learning to program the darn things? I have PROGRAMMING AND
> CUSTOMIZING PICmicro MICROCONTROLLERS by MYKE PREDKO, and the one thing
> I can say about the 2nd edition is that it is twice the size of the
> first... It is certainly not twice as as easy to understand... Exactly
> the oposite...
>
> Darryl
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
> ---
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>

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5. [picsig] RE: Getting started in the PIC...

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sun, 3 Nov 2002 22:44:37 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105415-2002.11.03-06.28.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks for the response...

I am trying to get started programming in PIC assembler... But it looks like russian to me... I have done Z80 and a number of other assemblers, C, pascal, fortran, perl, VB, basic etc. So I know programming...

I just don't know PIC programming - and if you don't even know the structure of memory usage or register then you have no hope. I have an application in mind...[Processing 4800 bps data and rearranging it]. I have a processor in mind (the 16F628)... And I have the programmer too...

My basic problem... I have no idea how to turn on an LED... I have code

```
        LIST R=DEC
        INCLUDE "p16f84.inc"
        __CONFIG....
        PAGE
        org 0
        nop
        bsf PORTB,0
        bsf STATUS,RP0
        bcf TRISB ^ 0x080,0
        bcf STATUS RP0
LOOP
        movf PORTA, w
        movwf PORTB
        goto LOOP
        end
```

This means nothing to me... The comments say port B.0 is the light in this case, but how do I know to do anything... What is port A used for?

Basically I need some sort of context.

Would you believe that that 1/4-1/2 inch book is now about 2 inch... And the first piece of code in the book (page 7) - an interrupt handler for serial communications - bit bashing... And the first bit of assembler (page 19) I can understand, and talks about int 021h so it must be 80x86. The first PIC code is on Page 65, and is

```
     addwf register, w|f
```

And the description is as bizzare as the rest of the book

There must be a simple 20 page document that talks about how to program a PIC

Darryl

Darryl Smith, VK2TDS POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

6. [picsig] RE: Getting started in the PIC - Datasheets

From: "CHIGA" <nh7s@hawaii.rr.com>
Date: Sun, 3 Nov 2002 02:52:57 -1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105419-2002.11.03-07.39.54--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm going to have to answer in several Emails, this one will be for
information, regarding the "structure of memory usage or register" of PICs.
In addition the Predko book you have, see:

    For PIC16F82
http://www.microchip.com/download/lit/pline/picmicro/families/16f8x/30430c.p
df

    For PIC16F82A (re: memory/register, I don't think there's a difference
but other there are other things that could significant).
http://www.microchip.com/download/lit/pline/picmicro/families/16f8x/35007b.p
df

    For PIC16F628
http://www.microchip.com/download/lit/pline/picmicro/families/16c62x/40300b.
pdf

    See the base webpage
http://www.microchip.com

    for any information that you'd want, just do a search.

    In short, pay attention to the PIC's separate memory and program
locations, Harvard architecture as opposed to von Neumann. Then there's the
memory bank switching (which you should be familar with the Z80).

    73 - Cal NH7S.

----- Original Message -----
From: "Darryl Smith" <Darryl@radio-active.net.au>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Sunday, November 03, 2002 1:44 AM
Subject: [picsig] RE: Getting started in the PIC...

> Thanks for the response...
>
> I am trying to get started programming in PIC assembler... But it looks
> like russian to me... I have done Z80 and a number of other assemblers,
> C, pascal, fortran, perl, VB, basic etc. So I know programming...
>
> I just don't know PIC programming - and if you don't even know the
> structure of memory usage or register then you have no hope. I have an
> application in mind...[Processing 4800 bps data and rearranging it]. I
> have a processor in mind (the 16F628)... And I have the programmer
> too...
>
> My basic problem... I have no idea how to turn on an LED... I have code
>
> LIST R=DEC
> INCLUDE "p16f84.inc"
> __CONFIG....
> PAGE
> org 0
> nop
> bsf PORTB,0
> bsf STATUS,RP0
> bcf TRISB ^ 0x080,0
> bcf STATUS RP0
> LOOP
> movf PORTA, w
> movwf PORTB
> goto LOOP
> end
>
> This means nothing to me... The comments say port B.0 is the light in
> this case, but how do I know to do anything... What is port A used for?
>
> Basically I need some sort of context.
>
> Would you believe that that 1/4-1/2 inch book is now about 2 inch... And
> the first piece of code in the book (page 7) - an interrupt handler for
> serial communications - bit bashing... And the first bit of assembler
> (page 19) I can understand, and talks about int 021h so it must be
> 80x86. The first PIC code is on Page 65, and is
>   addwf register, w|f
> And the description is as bizzare as the rest of the book
>
> There must be a simple 20 page document that talks about how to program

> a PIC
>
> Darryl
>
>
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
> ---
> You are currently subscribed to picsig as: nh7s@hawaii.rr.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] Re: Getting started in the PIC...

From: David Beach <dbeach@blvl.igs.net>
Date: Sun, 03 Nov 2002 22:59:53 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105574-2002.11.03-22.40.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> From: "Darryl Smith" <Darryl@radio-active.net.au>
> Date: Sun, 3 Nov 2002 18:26:10 +1100
Dave Benson's 'Easy PIC'n' and the other books in the series from Square One
publishing are meant to take you from knowing virtually nothing on up to
more complicated programming. He even explains how to run the MPASM
assembler. They are quite popular although I have only read the first book.
They deal with the 'F84 which is becoming obsolete but you should find it
easy enough to 'translate' to the 'F628.

I (and I expect most others) began with assembler then moved on to higher
level languages. Would anyone care to comment on the thought of *starting*
programming PICs with, for example, C (or whatever HLL you happen to know
and is available for PICs) and just skip the assembler, digging into it only
on a 'need to know' basis. It may sound heretical BUT....

David Beach
VE3STI

> Subject: [picsig] Getting started in the PIC...
>
> People
>
> I am after some advice... I want to start assembly language programming
> on the PIC and need to learn the language... Can anyone suggest a DECENT
> book on learning to program the darn things? I have PROGRAMMING AND
> CUSTOMIZING PICmicro MICROCONTROLLERS by MYKE PREDKO, and the one thing
> I can say about the 2nd edition is that it is twice the size of the
> first... It is certainly not twice as as easy to understand... Exactly
> the oposite...
>
> Darryl

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

8. [picsig] Re: Getting started in the PIC...

From: James Jefferson <jjeffers@aprsworld.net>
Date: Sun, 3 Nov 2002 22:09:51 +0000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105576-2002.11.03-22.52.47--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I started programming the PICs with CCS C. I only use assembler when I need to
do something esoteric or when the compiler does not support what I need.
Using C is nice because targeting different hardware is usually as simple and
changing a few defines and recompiling. From a beginner standpoint it is a
lot easier to write a hello world or a blinking LCD PIC program with C or

basic than with assembler.

I can elaborate more, but we've had heated discussions of high level languages
on this list recently...

-Jim KB0THN

On Monday 04 November 2002 03:59 am, David Beach wrote:
> I (and I expect most others) began with assembler then moved on to higher
> level languages. Would anyone care to comment on the thought of *starting*
> programming PICs with, for example, C (or whatever HLL you happen to know
> and is available for PICs) and just skip the assembler, digging into it
> only on a 'need to know' basis. It may sound heretical BUT....

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

9. [picsig] RE: Getting started in the PIC...

From: "CHIGA" <nh7s@hawaii.rr.com>
Date: Sun, 3 Nov 2002 20:30:31 -1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105592-2002.11.04-01.17.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Darryl,

    I've got your program to work. My explaination is lacking however. I
do not know why PORTA is in the program but with that line in, the PORTB LB0
(pin 6) flashes. Take it out and the LB0 stays on.

    I decided I can't take too much time to analyze what's going on,
besides, I have very little PIC assembly experience. I hope I haven't
confused you with my comments.

    I also had a problem loading the program with one of my loading programs
(PPP) but I was able to load the program using MPLAB and the PICSTART
programmer.

    With a PIC program, you need do some initialization, like set the memory
bank (sorry, I don't have an explanation other then to see what is in each
memory bank) then in order to write or read to/from PORTA or PORTB you must
set the TRISA and TRISB registers for input or output.

    Hope the comments in the program helps, if not ask and I'll try to
figure out what's going on. The mnemonics are a bit strange, you'll want to
look at the PIC16F84 instruction set in the datasheet. Microchip keeps
saying there's only 35 to learn.

    Can I convert you to C? There are free/shareware compilers around.

    73 - Cal NH7S.

----- Original Message -----
From: "Darryl Smith" <Darryl@radio-active.net.au>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Sunday, November 03, 2002 1:44 AM
Subject: [picsig] RE: Getting started in the PIC...

> Thanks for the response...
>
> I am trying to get started programming in PIC assembler... But it looks
> like russian to me... I have done Z80 and a number of other assemblers,
> C, pascal, fortran, perl, VB, basic etc. So I know programming...
>
> I just don't know PIC programming - and if you don't even know the
> structure of memory usage or register then you have no hope. I have an
> application in mind...[Processing 4800 bps data and rearranging it]. I
> have a processor in mind (the 16F628)... And I have the programmer
> too...
>
> My basic problem... I have no idea how to turn on an LED... I have code
>
> LIST R=DEC
> INCLUDE "p16f84.inc"
> __CONFIG....
> PAGE

> org 0
> nop
> bsf PORTB,0
> bsf STATUS,RP0
> bcf TRISB ^ 0x080,0
> bcf STATUS RP0
> LOOP
> movf PORTA, w
> movwf PORTB
> goto LOOP
> end
>
> This means nothing to me... The comments say port B.0 is the light in
> this case, but how do I know to do anything... What is port A used for?
>
> Basically I need some sort of context.
>
> Would you believe that that 1/4-1/2 inch book is now about 2 inch... And
> the first piece of code in the book (page 7) - an interrupt handler for
> serial communications - bit bashing... And the first bit of assembler
> (page 19) I can understand, and talks about int 021h so it must be
> 80x86. The first PIC code is on Page 65, and is
>   addwf register, w|f
> And the description is as bizzare as the rest of the book
>
> There must be a simple 20 page document that talks about how to program
> a PIC
>
> Darryl
>
>
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
> ---
> You are currently subscribed to picsig as: nh7s@hawaii.rr.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
[Attachment: led_on.asm; application/octet-stream; 2,120 bytes]
[Attachment: Led_on.hex; application/octet-stream; 84 bytes]

10. [picsig] RE: Getting started in the PIC...

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Mon, 4 Nov 2002 08:39:41 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105609-2002.11.04-08.23.28--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Daryl
I do assembly programming for a living. It is a tedious job. I avoid it
whenever possible. Have you considered using a compiler?

What project are you planning to work on? We're about to come out with an
updated PIC-E kit. It might make a good target board for your use.

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Darryl Smith
> Sent: Sunday, November 03, 2002 2:26 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Getting started in the PIC...
>
>
> People
>
> I am after some advice... I want to start assembly language programming
> on the PIC and need to learn the language... Can anyone suggest a DECENT
> book on learning to program the darn things? I have PROGRAMMING AND
> CUSTOMIZING PICmicro MICROCONTROLLERS by MYKE PREDKO, and the one thing
> I can say about the 2nd edition is that it is twice the size of the

> first... It is certainly not twice as as easy to understand... Exactly
> the oposite...
>
> Darryl
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

11. [picsig] RE: Getting started in the PIC...

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Tue, 5 Nov 2002 16:25:09 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105681-2002.11.05-00.09.04--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

G'Day All

Thanks to all those who have helped publically and privately. I believe
the consensus is
        1. The Easy PIC'n series from Square One is a good start for
Assembler programming
        2. I should try to use a higher level if possible
        3. Don't use the F84 for new designs - The 16F87x or 16F628 are
much better
        4. CCS C compiler with maintainance is the way to go

So I purchased a copy of CCS today, and it will be here tomorrow. And I
will program in C when possible. Using the 16F628 will make things much
easier for me with serial port support.

As for what I am working on, I guess you could call it an anti-tracker.
What that means you will have to wait until I have the prototype
working... And that will need to wait until later in the week.

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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12. [picsig] New Issue of Packet Status Register Available

From: John Ackermann   N8UR <jra@febo.com>
Date: Tue, 05 Nov 2002 11:09:27 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105711-2002.11.05-10.58.11--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Autumn 2002 issue of TAPR's journal, the _Packet_Status_Register_, is
now available online.

You can download it, and past issues of PSR, from http://www.tapr.org/psr
or via FTP from ftp.tapr.org/psr. The issue name is "Autumn_85_2002.pdf".

73,
John N8UR

John Ackermann   N8UR   jra@febo.com   http://www.febo.com

President, TAPR n8ur@tapr.org http://www.tapr.org

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

13. [picsig] Re: New Issue of Packet Status Register Available

From: "HSHK" <hshk@ix.netcom.com>
Date: Tue, 5 Nov 2002 11:17:04 -0500 (Eastern Standard Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105724-2002.11.05-11.06.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Your message is infected..... check you system !

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Tuesday, November 05, 2002 11:16:00 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] New Issue of Packet Status Register Available

The Autumn 2002 issue of TAPR's journal, the _Packet_Status_Register_, is
now available online.

You can download it, and past issues of PSR, from http://www.tapr.org/psr
or via FTP from ftp.tapr.org/psr. The issue name is "Autumn_85_2002.pdf".

73,
John N8UR

John Ackermann N8UR jra@febo.com http://www.febo.com
President, TAPR n8ur@tapr.org http://www.tapr.org

You are currently subscribed to picsig as: hshk@ix.netcom.com
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

.

14. [picsig] Re: New Issue of Packet Status Register Available

From: David VanHorn <dvanhorn@cedar.net>
Date: Tue, 05 Nov 2002 11:25:59 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105727-2002.11.05-11.11.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 11:17 AM 11/5/2002 -0500, HSHK wrote:
>
>Your message is infected..... check you system !
>

Nothing on it here.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

15. [picsig] Re: New Issue of Packet Status Register Available

From: Doug Bade <doug@clecom.com>
Date: Tue, 05 Nov 2002 11:30:38 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105728-2002.11.05-11.14.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Infected with what??? My Virus scanner saw nothing unusual?? What do you
refer to??

Doug KB8GVQ

At 11:17 AM 11/5/02 -0500, you wrote:

>
>Your message is infected..... check you system !
>
>
>-------Original Message-------
>
>From: <mailto:picsig@lists.tapr.org>TAPR PIC Development Special Interest
>Group
>Date: Tuesday, November 05, 2002 11:16:00 AM
>To: <mailto:picsig@lists.tapr.org>TAPR PIC Development Special Interest Group
>Subject: [picsig] New Issue of Packet Status Register Available

---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

16. [picsig] Re: New Issue of Packet Status Register Available

From: "HSHK" <hshk@ix.netcom.com>
Date: Tue, 5 Nov 2002 11:30:53 -0500 (Eastern Standard Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105729-2002.11.05-11.16.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

McAfee reporting the MIME Exploit virus....

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Tuesday, November 05, 2002 11:28:45 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: New Issue of Packet Status Register Available

At 11:17 AM 11/5/2002 -0500, HSHK wrote:
>
>Your message is infected..... check you system !
>

Nothing on it here.

You are currently subscribed to picsig as: hshk@ix.netcom.com
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

.

17. [picsig] Re: New Issue of Packet Status Register Available

From: John Ackermann N8UR <jra@febo.com>
Date: Tue, 05 Nov 2002 11:37:31 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105732-2002.11.05-11.21.11--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I hope not... while I posted the message from a Windows-based system, I was
using a non-MS mail client that doesn't have the various Outlook
vulnerabilities, and I have an updated McAfee virus scanner running.

John

--On Tuesday, November 05, 2002 11:25 AM -0500 David VanHorn
<dvanhorn@cedar.net> wrote:

> At 11:17 AM 11/5/2002 -0500, HSHK wrote:
>>
>> Your message is infected..... check you system !
>>
>
> Nothing on it here.
>
>
> ---
> You are currently subscribed to picsig as: jra@febo.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>
>

```
----
John Ackermann    N8UR         jra@febo.com     http://www.febo.com
President, TAPR                n8ur@tapr.org    http://www.tapr.org


---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

18. [picsig] Re: New Issue of Packet Status Register Available

```
From: "HSHK" <hshk@ix.netcom.com>
Date: Tue, 5 Nov 2002 11:40:14 -0500 (Eastern Standard Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105733-2002.11.05-11.25.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
I cannot go back and check becuase I had McAffee delete the message.

I only know what it reported.

If I get another I will save and check by hand.

I did not mean to offend.

Was only letting you (whom ever) know.

Maybe it was picked up in transit.

Bill  KA8VIT


-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Tuesday, November 05, 2002 11:38:13 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: New Issue of Packet Status Register Available

I hope not... while I posted the message from a Windows-based system, I was
using a non-MS mail client that doesn't have the various Outlook
vulnerabilities, and I have an updated McAfee virus scanner running.

John

--On Tuesday, November 05, 2002 11:25 AM -0500 David VanHorn
<dvanhorn@cedar.net> wrote:

> At 11:17 AM 11/5/2002 -0500, HSHK wrote:
>>
>> Your message is infected..... check you system !
>>
>
> Nothing on it here.
>
>
```

19. [picsig] Re: New Issue of Packet Status Register Available

```
From: David VanHorn <dvanhorn@cedar.net>
Date: Tue, 05 Nov 2002 11:47:15 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105736-2002.11.05-11.32.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
At 11:40 AM 11/5/2002 -0500, HSHK wrote:
>
>
>I cannot go back and check becuase I had McAffee delete the message.
>
>I only know what it reported.

Virus scanners can deceive you Luke, Don't trust them.


---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

20. [picsig] Re: New Issue of Packet Status Register Available

From: John Ackermann N8UR <jra@febo.com>
Date: Tue, 05 Nov 2002 11:49:41 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105737-2002.11.05-11.33.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Don't worry, no offense taken. Check this message, as it's being sent from exactly the same system.

--On Tuesday, November 05, 2002 11:40 AM -0500 HSHK <hshk@ix.netcom.com> wrote:

>
>
>
> I cannot go back and check becuase I had McAffee delete the message.
>
> I only know what it reported.
>
> If I get another I will save and check by hand.
>
> I did not mean to offend.
>
> Was only letting you (whom ever) know.
>
> Maybe it was picked up in transit.
>
> Bill KA8VIT
>
>
> -------Original Message-------
>
>
> From: TAPR PIC Development Special Interest Group
> Date: Tuesday, November 05, 2002 11:38:13 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Re: New Issue of Packet Status Register Available
> I hope not... while I posted the message from a Windows-based system, I
> was using a non-MS mail client that doesn't have the various Outlook
> vulnerabilities, and I have an updated McAfee virus scanner running.
>
> John
>
> --On Tuesday, November 05, 2002 11:25 AM -0500 David VanHorn
> <dvanhorn@cedar.net> wrote:
>
>> At 11:17 AM 11/5/2002 -0500, HSHK wrote:
>>>
>>> Your message is infected..... check you system !
>>>
>>
>> Nothing on it here.
>>
>>
> _____
> [Image: "hspace=0"] IncrediMail - Email has finally evolved - Click
> Here

John Ackermann N8UR jra@febo.com http://www.febo.com
President, TAPR n8ur@tapr.org http://www.tapr.org

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

21. [picsig] Re: New Issue of Packet Status Register Available

From: "HSHK" <hshk@ix.netcom.com>
Date: Tue, 5 Nov 2002 11:55:28 -0500 (Eastern Standard Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105744-2002.11.05-11.40.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Your last two were fine...

Maybe something was picked up in transit.

Maybe something looked like the viurs's signature.

As I said earlier...just an FYI to check.

Enough wasted bandwidth. <smile>

73,

Bill KA8VIT

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Tuesday, November 05, 2002 11:50:11 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: New Issue of Packet Status Register Available

Don't worry, no offense taken. Check this message, as it's being sent from
exactly the same system.

--On Tuesday, November 05, 2002 11:40 AM -0500 HSHK <hshk@ix.netcom.com>
wrote:

>
>
>
> I cannot go back and check becuase I had McAffee delete the message.
>
> I only know what it reported.
>
> If I get another I will save and check by hand.
>
> I did not mean to offend.
>
> Was only letting you (whom ever) know.
>
> Maybe it was picked up in transit.
>
> Bill KA8VIT
>
>
> -------Original Message-------
>
>
> From: TAPR PIC Development Special Interest Group
> Date: Tuesday, November 05, 2002 11:38:13 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Re: New Issue of Packet Status Register Available
> I hope not... while I posted the message from a Windows-based system, I
> was using a non-MS mail client that doesn't have the various Outlook
> vulnerabilities, and I have an updated McAfee virus scanner running.
>
> John
>
> --On Tuesday, November 05, 2002 11:25 AM -0500 David VanHorn
> <dvanhorn@cedar.net> wrote:
>
>> At 11:17 AM 11/5/2002 -0500, HSHK wrote:
>>>
>>> Your message is infected..... check you system !
>>>
>>
>> Nothing on it here.
>>
>>
> _____
> [Image: "hspace=0"] IncrediMail - Email has finally evolved - Click
> Here

John Ackermann N8UR jra@febo.com http://www.febo.com
President, TAPR n8ur@tapr.org http://www.tapr.org

You are currently subscribed to picsig as: hshk@ix.netcom.com
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

.

22. [picsig] Re: New Issue of Packet Status Register Available

From: Doug Bade <doug@clecom.com>
Date: Tue, 05 Nov 2002 12:10:02 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105747-2002.11.05-11.53.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

John, your second message had no html to speak of, and the mime issue is
an HTML issue.... It has to do with IE 5.x un-patched early versions and
may or may not be anything... The html links you sent the first time did
not come through the second time for some reason.. at least not as html...

Doug

At 11:49 AM 11/5/02 -0500, you wrote:
>Don't worry, no offense taken. Check this message, as it's being sent
>from exactly the same system.
>
>--On Tuesday, November 05, 2002 11:40 AM -0500 HSHK <hshk@ix.netcom.com>
>wrote:
>
>>
>>
>>
>>I cannot go back and check becuase I had McAffee delete the message.
>>
>>I only know what it reported.
>>
>>If I get another I will save and check by hand.

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23. [picsig] Re: New Issue of Packet Status Register Available

From: John Ackermann   N8UR <jra@febo.com>
Date: Tue, 05 Nov 2002 12:21:43 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105749-2002.11.05-12.05.16--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Maybe that's it... I should have *no* html in my messages, as I'm set to
send plain-text only. Perhaps the overly aggressive virus scan saw the URL
that I included in the original message and triggered off of that.

John

--On Tuesday, November 05, 2002 12:10 PM -0500 Doug Bade <doug@clecom.com>
wrote:

> John, your second message had no html to speak of, and the mime issue is
> an HTML issue.... It has to do with IE 5.x un-patched early versions and
> may or may not be anything... The html links you sent the first time did
> not come through the second time for some reason.. at least not as html...
>
> Doug
>
>
>
> At 11:49 AM 11/5/02 -0500, you wrote:
>> Don't worry, no offense taken. Check this message, as it's being sent
>> from exactly the same system.
>>
>> --On Tuesday, November 05, 2002 11:40 AM -0500 HSHK <hshk@ix.netcom.com>
>> wrote:
>>
>>>
>>>
>>>
>>> I cannot go back and check becuase I had McAffee delete the message.

>>>
>>> I only know what it reported.
>>>
>>> If I get another I will save and check by hand.
>
>
> ---
> You are currently subscribed to picsig as: jra@febo.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>
>

John Ackermann   N8UR   jra@febo.com   http://www.febo.com
President, TAPR   n8ur@tapr.org   http://www.tapr.org

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24. [picsig] CCS C Serial IO

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Wed, 6 Nov 2002 19:43:49 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105818-2002.11.06-03.28.27--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi...

I have bought CCS C, and am attempting to do some non-blocking serial IO
with the device, talking to a PIC16F628 with the internal RS-232...

According to the manual I can use kbhit so that getc() does not block.
The question is how can I have putc or puts so that it does not block?
What is the C equivalent of kbhit for transmit?

Many thanks

Darryl

P.s. I have implemented the code I want to put onto the PIC, and I am
debugging it in the free Turbo C++ from borland as we speak. Turns out
the code is too complex for me to write in assembler... I am now glad I
have purchased the C compiler...

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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25. [picsig] Re: CCS C Serial IO

From: James Jefferson <jjeffers@aprsworld.net>
Date: Wed, 6 Nov 2002 07:38:33 +0000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105846-2002.11.06-08.21.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> I have bought CCS C, and am attempting to do some non-blocking serial IO
> with the device, talking to a PIC16F628 with the internal RS-232...
>
> According to the manual I can use kbhit so that getc() does not block.
> The question is how can I have putc or puts so that it does not block?
> What is the C equivalent of kbhit for transmit?

There isn't a non-blocking transmit or recieve in software. Remember that the
PIC is single-tasking and there is no OS to control such things for you!

The fastest serial reads and writes will be if you use the built-in hardware
USART. Your other option is to write serial interrupt routines.

-Jim

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26. [picsig] Re: CCS C Serial IO

From: John Hansen <hansen@fredonia.edu>
Date: Wed, 06 Nov 2002 09:25:29 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105849-2002.11.06-09.12.47--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Jim is correct. Once you put a byte into the TXREG it will start
transmitting. If you keep writing bytes to the TXREG before they are
transmitted (There is a 1 byte buffer, plus the byte being transmitted) the
data will become corrupted.

I think what Darryl may be referring to is using the USART transmit
interrupt to "fake" multitasking here. You could create a buffer for your
transmitted data and when the interrupt fires to tell you the USART is
ready to transmit, you could transmit the next byte in the buffer. That
way you could be doing other things while waiting for the data to transmit.

An alternative "ugly" way of doing this (the way I did it in the KISS TNC)
is to have a transmit buffer, and every now and then poll to see if the
USART is ready to transmit and if it is to feed it another byte. Not as
elegant as the interrupt method, but it will work.

The bottom line though, is that none of this is explicitly coded in CCS...
you have to do it yourself. When you do a putc() in CCS, if the USART is
free, it puts the byte in TXREG. If not, it blocks until the USART is
free. If you want the program to go on and do other things, you'll have to
build your own buffer and look at the TXIF bit of the PIR1 register to see
if TXREG is ready for data. If it is, then do your putc() and CCS will
copy the data to TXREG and your program will proceed without blocking.

John

At 07:38 AM 11/6/2002 +0000, you wrote:
> > I have bought CCS C, and am attempting to do some non-blocking serial IO
> > with the device, talking to a PIC16F628 with the internal RS-232...
> >
> > According to the manual I can use kbhit so that getc() does not block.
> > The question is how can I have putc or puts so that it does not block?
> > What is the C equivalent of kbhit for transmit?
>
>There isn't a non-blocking transmit or recieve in software. Remember that the
>PIC is single-tasking and there is no OS to control such things for you!
>
>The fastest serial reads and writes will be if you use the built-in hardware
>USART. Your other option is to write serial interrupt routines.
>
>-Jim
>
>---
>You are currently subscribed to picsig as: hansen@fredonia.edu
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

27. [picsig] RE: CCS C Serial IO

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Wed, 6 Nov 2002 10:35:54 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105855-2002.11.06-10.19.27--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I did non-blocking I/O with the PIC-E-II. It was very tricky to implement. I
didn't use any CCS library calls. I can send yuu a copy of the source code.
I'm not sure you can fit it in a '628 because it has limited program space. The
PIC-E-II uses a '876. If you want to look at the code, send me a reply. It is
available for non-commercial use. You need to promise to not use any of the

code on commercial products.

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Darryl Smith
> Sent: Wednesday, November 06, 2002 3:44 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] CCS C Serial IO
>
>
> Hi...
>
> I have bought CCS C, and am attempting to do some non-blocking serial IO
> with the device, talking to a PIC16F628 with the internal RS-232...
>
> According to the manual I can use kbhit so that getc() does not block.
> The question is how can I have putc or puts so that it does not block?
> What is the C equivalent of kbhit for transmit?
>
> Many thanks
>
> Darryl
>
> P.s. I have implemented the code I want to put onto the PIC, and I am
> debugging it in the free Turbo C++ from borland as we speak. Turns out
> the code is too complex for me to write in assembler... I am now glad I
> have purchased the C compiler...
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
> ---
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>

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28. [picsig] PIC-E-II PCB.....

From: John Morley <jmorley@endeavour-usa.com>
Date: Wed, 06 Nov 2002 23:24:06 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-105973-2002.11.06-23.07.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Gang,

I have posted a picture of the new PIC-E-II PCB prototype for anyone that's
interested. The
URL to view the picture is:

http://www.endeavour-usa.com/images/PIC-E-II-PCB.jpg

I just returned home from 10 days in Germany, so I haven't had a chance to
stuff the board yet. I
plan to do that over the next few days. I'm still waiting for one part for
the kits (the FRAM chip),
and as soon as that comes in, I can distribute them. In the meantime, I
thought you'd like a sneak
preview!

John

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29. [picsig] Re: CCS C Serial IO

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Thu, 7 Nov 2002 17:47:43 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106001-2002.11.07-01.31.49--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks to those who responded... From those people I have worked out
that....

CCS C does do some blocking IO. For instance the getc() function will
block until there is data. Therefore the correct way to do things is to
use the kbhit() function to see if there is data before calling getc().

As for the serial code, where there is the capability in hardware the
correct way is to interogate bit 1 of the TXSTA reginster. It is
possible to interogate the PIR1 register, but only if interrupts are
available. Bit 1 of TXSTA is 1 if the buffer is empty.

So my code would look something like

```
#BIT TRMT = 0x98.1

Void main (void)
{

  while (1 == 1){
    while (kbhit()){
      c = getc();
      process(c);  // And add to a stack (Char Buffer)
    }
    if (TRMT){
      putc();    // From a stack
    }
  }
}
```

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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30. [picsig] Re: CCS C Serial IO

From: "HSHK" <hshk@ix.netcom.com>
Date: Thu, 7 Nov 2002 08:35:20 -0500 (Eastern Standard Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106033-2002.11.07-08.20.22--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

It doesn't block in the sense that a RTOS blocks...

It simply loops until there is data. That is how the standard
'C' getc() function works, which is why there is a kbhit()
function.

Good luck.

Bill KA8VIT

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Thursday, November 07, 2002 01:48:33 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: CCS C Serial IO

Thanks to those who responded... From those people I have worked out
that....

CCS C does do some blocking IO. For instance the getc() function will

block until there is data. Therefore the correct way to do things is to
use the kbhit() function to see if there is data before calling getc().

As for the serial code, where there is the capability in hardware the
correct way is to interogate bit 1 of the TXSTA reginster. It is
possible to interogate the PIR1 register, but only if interrupts are
available. Bit 1 of TXSTA is 1 if the buffer is empty.

So my code would look something like

```
#BIT TRMT = 0x98.1

Void main (void)
{

while (1 == 1){
while (kbhit()){
c = getc();
process(c); // And add to a stack (Char Buffer)
}
if (TRMT){
putc(); // From a stack
}
}
}
```

Darryl Smith, VK2TDS POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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.

31. [picsig] RE: PIC-E-II PCB.....

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Thu, 7 Nov 2002 08:57:40 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106037-2002.11.07-08.41.18--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Looks great! I'm waiting anxiously for a board. I'll try to send you some
software tomorrow. You don't need the fram chip to get started. It is used for
packet storage.

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Morley
> Sent: Wednesday, November 06, 2002 11:24 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] PIC-E-II PCB.....
>
>
> Hi Gang,
>
> I have posted a picture of the new PIC-E-II PCB prototype for anyone that's
> interested. The
> URL to view the picture is:
>
> http://www.endeavour-usa.com/images/PIC-E-II-PCB.jpg
>
> I just returned home from 10 days in Germany, so I haven't had a chance to
> stuff the board yet. I
> plan to do that over the next few days. I'm still waiting for one part for
> the kits (the FRAM chip),
> and as soon as that comes in, I can distribute them. In the meantime, I
> thought you'd like a sneak
> preview!
>
> John
>

>
>
>
>
> ---
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>

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32. [picsig] Re: CCS C Serial IO

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Thu, 7 Nov 2002 09:27:54 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106041-2002.11.07-09.11.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Why not do it in an ISR? Use an i/o bit that has an edge interrupt like RB0.
When you get the edge from the sync bit, disable the edge interrupt, start a
timer for 1.5 bit periods, then sample seven more bits at one bit period
intervals from there. Shift each bit into a buffer. You now have a byte. Wait
for another bit period before re-enabling the edge interrupt.

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Darryl Smith
> Sent: Thursday, November 07, 2002 1:48 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Re: CCS C Serial IO
>
>
> Thanks to those who responded... From those people I have worked out
> that....
>
> CCS C does do some blocking IO. For instance the getc() function will
> block until there is data. Therefore the correct way to do things is to
> use the kbhit() function to see if there is data before calling getc().
>
> As for the serial code, where there is the capability in hardware the
> correct way is to interogate bit 1 of the TXSTA reginster. It is
> possible to interogate the PIR1 register, but only if interrupts are
> available. Bit 1 of TXSTA is 1 if the buffer is empty.
>
> So my code would look something like
>
> #BIT TRMT = 0x98.1
>
> Void main (void)
> {
>
>   while (1 == 1){
>   while (kbhit()){
>   c = getc();
>   process(c); // And add to a stack (Char Buffer)
>   }
>   if (TRMT){
>   putc();   // From a stack
>   }
>   }
> }
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
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>

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33. [picsig] Help with 16F628 and CCS and RS-232

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Fri, 8 Nov 2002 13:37:59 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106106-2002.11.07-21.23.07--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

G'Day All

I know I am doing something wrong... I am not sure what. I am attempting
to get characters out of a PIC16F628 throgh the in-built RS-232 port.

I have power connected to pin 14, and ground to pin 5. I have a crystal
oscillator between pins 15 and 16. I have programmed the following code
in using CCS C and get nothing out. Since my cro does not go up that
high I cannot be sure that the oscialator is working, but everything
looks fine.

Any hints would be appreciated

Darryl

```
#include <16F628.h>
#use DELAY (clock=10000000)
#use rs232 (BAUD=4800, xmit=PIN_B2, rcv=PIN_B1)
#fuses HS, NOWDT
#BIT TRMT = 0x98.1

void main (void)
{
while (TRUE) putc ('U');
}
```

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

34. [picsig] Re: Help with 16F628 and CCS and RS-232

From: James Jefferson <jjeffers@aprsworld.net>
Date: Thu, 7 Nov 2002 21:39:04 +0000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106111-2002.11.07-22.21.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The 16F628 requires special initialization to use port A as digital.

```
setup_comparator(NC_NC_NC_NC);
setup_ccp2(CCP_OFF);
setup_vref(false);
```

You may find CCS's forum a helpful resource:
http://www.pic-c.com/forum/general/

-Jim KB0THN

On Friday 08 November 2002 02:37 am, Darryl Smith wrote:
> [picsig] Help with 16F628 and CCS and RS-232
>
> From:
> "Darryl Smith" <Darryl@radio-active.net.au>
>
>
> To:
> "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

>
>
> Date:
> Fri, 8 Nov 2002 13:37:59 +1100
>
>
> G'Day All
>
> I know I am doing something wrong... I am not sure what. I am attempting
> to get characters out of a PIC16F628 throgh the in-built RS-232 port.
>
> I have power connected to pin 14, and ground to pin 5. I have a crystal
> oscillator between pins 15 and 16. I have programmed the following code
> in using CCS C and get nothing out. Since my cro does not go up that
> high I cannot be sure that the oscialator is working, but everything
> looks fine.
>
> Any hints would be appreciated
>
> Darryl
> --------
>
> #include <16F628.h>
> #use DELAY (clock=10000000)
> #use rs232 (BAUD=4800, xmit=PIN_B2, rcv=PIN_B1)
> #fuses HS, NOWDT
> #BIT TRMT = 0x98.1
>
> void main (void)
> {
> while (TRUE) putc ('U');
> }
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
> ---
> You are currently subscribed to picsig as: jjeffers@aprsworld.net
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35. [picsig] Re: Help with 16F628 and CCS and RS-232

From: "Byon Garrabrant" <byon@byon.com>
Date: Thu, 07 Nov 2002 20:17:48 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106114-2002.11.07-23.01.27--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Did you tie pin 4 to V+?

Byon

On 8 Nov 2002 at 13:37, Darryl Smith wrote:

> G'Day All
>
> I know I am doing something wrong... I am not sure what. I am
> attempting to get characters out of a PIC16F628 throgh the in-built
> RS-232 port.
>
> I have power connected to pin 14, and ground to pin 5. I have a
> crystal oscillator between pins 15 and 16. I have programmed the
> following code in using CCS C and get nothing out. Since my cro does
> not go up that high I cannot be sure that the oscialator is working,
> but everything looks fine.
>
> Any hints would be appreciated
>
> Darryl
> --------
>

```
> #include <16F628.h>
> #use DELAY (clock=10000000)
> #use rs232 (BAUD=4800, xmit=PIN_B2, rcv=PIN_B1)
> #fuses HS, NOWDT
> #BIT TRMT = 0x98.1
>
> void main (void)
> {
> while (TRUE) putc ('U');
> }
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
> ---
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---
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```

36. [picsig] Re: Help with 16F628 and CCS and RS-232

```
From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Fri, 8 Nov 2002 18:56:10 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106146-2002.11.08-02.40.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

Byon said
>Did you tie pin 4 to V+?

No. That seemd to help me a lot... At least now I am having less issues
with the C compiler... Now I am just getting something even stranger...

```
        void main (void)
        {
                setup_comparator(NC_NC_NC_NC);
                setup_ccp1(CCP_OFF);
                setup_vref(false);
                puts ("Copyright Darryl Smith VK2TDS 2002 - Free to
Hams\n");
                delay_ms(1000);
                while (TRUE) {puts('X'); delay_ms(10);}
        }
```

Produces

```
Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy&Co
py&Copy&
```

Seems like it keeps reseting itself for some reason that I cant work
out. As far as I can tell I have turned the watchdog timer off with the
fuses...

Seems like I have a good article to be written here...

Darryl

```
---------
Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au



---
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```

37. [picsig] Re: Help with 16F628 and CCS and RS-232

From: James Jefferson <jjeffers@aprsworld.net>
Date: Fri, 8 Nov 2002 07:25:17 +0000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106169-2002.11.08-08.08.14--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Check your fuses very carefully. The 16F628 has a few fuses that are not
documented in the manual. You can run picchips to see the fuses.

I'd be happy to send you my fuses block and an tested and working hello world
program for the '628, but I don't want to "infect" you with the "viral" GPL.

-Jim KB0THN

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38. [picsig] Re: Help with 16F628 and CCS and RS-232

From: Jeff King <jeff@aerodata.net>
Date: Fri, 8 Nov 2002 11:32:26 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106188-2002.11.08-11.16.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The watchdog might be on.

--
Jeff King, jeff@aerodata.net on 11/08/2002

On Fri, 8 Nov 2002 18:56:10 +1100, Darryl Smith wrote:
>Byon said
>>Did you tie pin 4 to V+?
>
>No. That seemd to help me a lot... At least now I am having less
>issues
>with the C compiler... Now I am just getting something even
>stranger...
>
>   void main (void)
>   {
>   setup_comparator(NC_NC_NC_NC);
>   setup_ccp1(CCP_OFF);
>   setup_vref(false);
>   puts ("Copyright Darryl Smith VK2TDS 2002 - Free to
>Hams\n");
>   delay_ms(1000);
>   while (TRUE) {puts('X'); delay_ms(10);}
>   }
>
>Produces
>
>
>Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy&Copy
>&Co
>py&Copy&
>
>Seems like it keeps reseting itself for some reason that I cant work
>out. As far as I can tell I have turned the watchdog timer off with
>the
>fuses...
>
>Seems like I have a good article to be written here...
>
>Darryl
>
>
>---------
>Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
>Mobile Number 0412 929 634 [+61 4 12 929 634 International]
>Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
>

>---
>You are currently subscribed to picsig as: jeff@aerodata.net
>To unsubscribe send a blank email to leave-picsig-
>6948X@lists.tapr.org

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39. [picsig] GPS receiving routines

From: MTWAL <MTWAL@cc.usu.edu>
Date: Fri, 08 Nov 2002 20:38:38 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106247-2002.11.08-22.22.28--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have been trying to understand the NMEA Receiving routine written by Byon. Has anyone been able to use it with success. I am using a Garmin 35LVC. Do I need to program the Garmin to transmit the GPRMC output. Or is that the default. I looked at the specs. for the Garmin and could not see that there was any default output. It did say that the GSA, GGA, GSV, RMC, and RMT sentences are enabled at the factory. Does this mean that each of these sentences are output each time, or once every second?

I guess my question is: is there any additional initialization that needs to be done to get the Garmin 35 to output the GPRMC at 4800 baud?

In reading the specs. for the Garmin I found conflicting information on what the default serial trnsmsn rate is. Does anyone know if it is 4800, or 9600 baud?

Another question. I am full of questions. If the Garmin receiver cannot get a fix, is there a default output on the serial port? I am trying to test this in a building without the ability to place the antenna outside for line of site to the satellites.

I have also used the EZPIK code to poll a pic-e and respond with a message. The poll is recognized only 1/4 of the time. There seems to be a problem with the timing, or I have a lot of interferance. Has anyone used this program, and has some wisdom they would like to share?

When it all comes together I would like to be able to poll a pic-e, and have it respond by sending it's current GPS location.

Thanks for the help,

Matt Waldron
mtwal@cc.usu.edu

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

40. [picsig] Re: GPS receiving routines

From: "Byon Garrabrant" <byon@byon.com>
Date: Fri, 08 Nov 2002 21:13:17 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106249-2002.11.08-23.57.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 8 Nov 2002 at 20:38, MTWAL wrote:

> I have been trying to understand the NMEA Receiving routine written by
> Byon. Has anyone been able to use it with success.

I have ;)

Seriously, you be much clearer on your questions if you plug the GPS into a PC running a terminal program (Hyperterm) at 4800 baud. You should see all the NMEA sentences sent each second.

Byon

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

41. [picsig] Re: Help with 16F628 and CCS and RS-232

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sat, 9 Nov 2002 16:32:36 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106265-2002.11.09-00.17.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Greetings all...

I am getting further. I found that I needed to ground pins 9-12.. They
are RB3-RB6. Since I have a setup_ccp1(CCP_OFF) I have no idea why this
was needed... Things work a whole lot better now...

So here is my code... And this piece is released under GPL :-).

The interesting thing is that CCS as discussed earlier has no concept of
non-blocking OUTPUT. INPUT will block.

Darryl...

```
#include <16F628.h>
#use DELAY (clock=10000000, RESTART_WDT)
#use rs232 (BAUD=4800, xmit=PIN_B2, rcv=PIN_B1, ERRORS)
#fuses HS, NOWDT
#BIT TRMT = 0x98.1

void main (void)
{

char c;
setup_comparator(NC_NC_NC_NC);
setup_ccp1(CCP_OFF);
setup_vref(FALSE);
/*setup_wdt(WDT_2304MS);*/
disable_interrupts(GLOBAL);

puts ("GPL Darryl Smith VK2TDS 2002\n");
delay_ms (1000);

while (1 == 1){
  c = getc();
  while (!TRMT); /* Block until Output is finished */
 putc (c-1);
 }
}
```

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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42. [picsig] Re: GPS receiving routines

From: Larry Williams <wizzzard@bellsouth.net>
Date: Sat, 09 Nov 2002 00:11:13 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106272-2002.11.09-00.55.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

use the software provided by garmin to program the units. hook the red
wire to +, black to -. since you have the L version, just put in 5
volts. Hook the white wire to rx data in db9 pin 2 and blue wire to db9
pin 3, black to pin 5 for regular rs232 db9 connector. all sentences are
enabled from the factory, the configuration software lets you just put a
check in the box for the one or ones you want to receive out.
personally, the GPRMC is the one I use, most info for my apps. if you

are in the US select the area that has CONUS in it, don't remember the
whole line. select how often you want the data sent to you, I use 1
second. set the baud rate you want data sent at. the unit defaults to
4800 baud from the fact. after you upload config data to the unit, power
it down then back up. it will then connect at the new baud rate you
select (if you changed it to anything other than the 4800 it came at).
the wires on the unit connect directly to the computer, no rs232 level
translator needed.

MTWAL wrote:
>
> I have been trying to understand the NMEA Receiving routine written by Byon.
> Has anyone been able to use it with success. I am using a Garmin 35LVC. Do I
> need to program the Garmin to transmit the GPRMC output. Or is that the
> default. I looked at the specs. for the Garmin and could not see that there
> was any default output. It did say that the GSA, GGA, GSV, RMC, and RMT
> sentences are enabled at the factory. Does this mean that each of these
> sentences are output each time, or once every second?
>
> I guess my question is: is there any additional initialization that needs to
> be done to get the Garmin 35 to output the GPRMC at 4800 baud?
>
> In reading the specs. for the Garmin I found conflicting information on what
> the default serial trnsmsn rate is. Does anyone know if it is 4800, or 9600
> baud?
>
> Another question. I am full of questions. If the Garmin receiver cannot get
> a fix, is there a default output on the serial port? I am trying to test this
> in a building without the ability to place the antenna outside for line of
> site to the satellites.
>
> I have also used the EZPIK code to poll a pic-e and respond with a message.
> The poll is recognized only 1/4 of the time. There seems to be a problem with
> the timing, or I have a lot of interferance. Has anyone used this program,
> and has some wisdom they would like to share?
>
> When it all comes together I would like to be able to poll a pic-e, and have
> it respond by sending it's current GPS location.
>
> Thanks for the help,
>
> Matt Waldron
> mtwal@cc.usu.edu
>
> ---
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> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
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43. [picsig] Newly Developed APRS Toy...

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Wed, 13 Nov 2002 19:34:24 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106775-2002.11.13-03.19.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

People...

Since I have now finished the prototype I will now let you all know
about my newly developed toy...

What most people have concentrated on is Trackers, which transmit the
positions from a GPS reciever to the world. I have developed almost
exactly the oposite - a device the recieves APRS packets and uploads
them to a GPS receiever without the need to a transmitting radio.
Basically think of this as being like a D7 radio, without the radio or
display.

The reason I have done it this way is that there are times in public
service events (or my consulting work) where we need to distribute APRS
information out into the field - but where it is not appropriate to have
transmitting stations, or laptops. So I have developed a device that
will go between a scanner and a GPS reciever to do that.

At the moment I am decoding AX-25 in an 16F84 IC, and feeding the serial
stream into a 16F628. I am working on getting rid of the 16F84 but this

might take a little time. I also have a MAX232 in there, but depending
on the voltage I choose that might change model, or I might get rid of
it all together. [I am pretty sure that 3V will not work for RS-232 high
:-)]. I am looking at doing a PCB, but that might take some time... [I
also want to do a surface mount version whe I get the bugs out...]

Late last night I was informed that Garmin ETREX GPS recievers (but
higher models are) are not compatible with this [Feel free to email
GARMIN to complain that the ETREX does not have NMEA/NMEA interface mode
- I was really annoyed when I found out]. I am going to have a look at
doing a PIC to allow this unit to work with the GARMIN binary protocol.
It does not look TOO hard, but you can never tell.

Anyway some photos are available on
http://radio-active.net.au/web/tracking/antitracker.html

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

44. [picsig] Re: Newly Developed APRS Toy...

From: David Beach <dbeach@blvl.igs.net>
Date: Wed, 13 Nov 2002 20:09:55 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106883-2002.11.13-19.51.11--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

My congratulations on what seems (to me, at least, though I am more a casual
APRS observer than user) a novel and sort of 'why didn't I think of that'
idea! I have a GPSMAP 162 on my boat - maybe I will connect it up....

I will keep an interested eye on your website as the project progresses.

David Beach
VE3STI

> From: "Darryl Smith" <Darryl@radio-active.net.au>
> Date: Wed, 13 Nov 2002 19:34:24 +1100
> Subject: [picsig] Newly Developed APRS Toy...
>
> What most people have concentrated on is Trackers, which transmit the
> positions from a GPS reciever to the world. I have developed almost
> exactly the oposite - a device the recieves APRS packets and uploads
> them to a GPS receiever without the need to a transmitting radio.
> Basically think of this as being like a D7 radio, without the radio or
> display.
>
> The reason I have done it this way is that there are times in public
> service events (or my consulting work) where we need to distribute APRS
> information out into the field - but where it is not appropriate to have
> transmitting stations, or laptops. So I have developed a device that
> will go between a scanner and a GPS reciever to do that.

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45. [picsig] APRS on GARMIN 176

From: "Andrew Rich" <andrew.rich@bigpond.com>
Date: Thu, 14 Nov 2002 11:10:42 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106884-2002.11.13-19.54.32--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

updated closeup

www.tech-software.net

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46. [picsig] Re: picsig digest: November 13, 2002

From: "John Griswold" <kb1hdo@hotmail.com>
Date: Thu, 14 Nov 2002 09:22:22 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106947-2002.11.14-09.06.15--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

John Griswold, KB1HDO
KB1HDO@hotmail.com
http://home.nethere.com/johngriswold
+1(978)772-5406 (H) +1(978)772-4319 (F)
+1(617)834-5787 (M) +1(781)687-0576 (W)
6178345787@mobile.att.net (Text)

>I am pretty sure that 3V will not work for RS-232 high
>
>Darryl
>---------
>Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
>Mobile Number 0412 929 634 [+61 4 12 929 634 International]
>Darryl@radio-active.net.au | www.radio-active.net.au

RS-232 spec is +/- 3..18 V, so 3 volts "should" work. Depends on the
implementation of the interface. Some manufacturers (gasp!) "cheat" a
little.

73,

John Griswold, KB1HDO
KB1HDO@hotmail.com

_____
Help STOP SPAM with the new MSN 8 and get 2 months FREE*
http://join.msn.com/?page=features/junkmail

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47. [picsig] Re: picsig digest: November 13, 2002

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Thu, 14 Nov 2002 09:59:36 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106952-2002.11.14-09.43.28--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The spec says that anything above +3 volts is a one and anything below -3v is a
zero. Anything in between is undefined. Some manufacturers like Maxum
discrimiate at ttl compatible levels, so they work with non-rs232 parts. Most
manufacturers of new equipment switch at this level. This is why GPS receivers
can be directly connected to "most" computer equipment even though the signal
levels are wrong.

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of John Griswold
> Sent: Thursday, November 14, 2002 9:22 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Re: picsig digest: November 13, 2002
>
>
>
>
>
>
>
> John Griswold, KB1HDO
> KB1HDO@hotmail.com
> http://home.nethere.com/johngriswold

> +1(978)772-5406 (H) +1(978)772-4319 (F)
> +1(617)834-5787 (M) +1(781)687-0576 (W)
> 6178345787@mobile.att.net (Text)
>
>
> >I am pretty sure that 3V will not work for RS-232 high
> >
> >Darryl
> >---------
> >Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> >Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> >Darryl@radio-active.net.au | www.radio-active.net.au
>
> RS-232 spec is +/- 3..18 V, so 3 volts "should" work. Depends on the
> implementation of the interface. Some manufacturers (gasp!) "cheat" a
> little.
>
> 73,
>
> John Griswold, KB1HDO
> KB1HDO@hotmail.com
>
>
>
> _____
> Help STOP SPAM with the new MSN 8 and get 2 months FREE*
> http://join.msn.com/?page=features/junkmail
>
>
> ---
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> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

48. [picsig] Re: picsig digest: November 13, 2002

From: "J.P. Rouland" <jprouland@attbi.com>
Date: Thu, 14 Nov 2002 07:25:57 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-106955-2002.11.14-10.11.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Our group, MARC (Motorcycle Amateur Radio Club), has
experimented a lot with receiving APRS, and, because of
size, displaying the result on the GPS's own screen (cannot
carry a laptop on the handlebars!).
So, I can tell you that MOST Garmin GPS do NOT accept NMEA
INPUT (even if they DO output NMEA).
The ones that do: GPS3, GPS3+, GPS5 (but only with MOST
RECENT firmware!), and SOME recent Street Pilots (Color, I
think). Older Street Pilots DO NOT receive!
What our group looks for (and that's why I am on the list)
is for a gizmo that would do both: Tiny Track 2 (with
variable beaconing delay, and "sharp turns" report, GREAT!),
AND what Darryl is developing, all in one unit (or: in one
box. Could be 2 PCB...)
While the KPC3 does the job (that's what most of us use),
the size and wiring doesn't help, on the cramped quarters of
a motorcycle, and it has so many extra unneeeded
functions...
For what's it's worth,
J.P. Rouland NQ6T Fremont, CA.

TAPR PIC Development Special Interest Group digest wrote:
>
> TAPR PIC Development Special Interest Group Digest for Wednesday, November 13, 2002.
>
> 1. Newly Developed APRS Toy...
> 2. Re: Newly Developed APRS Toy...
> 3. APRS on GARMIN 176
>
> --
>
> Subject: Newly Developed APRS Toy...
> From: "Darryl Smith" <Darryl@radio-active.net.au>

> Date: Wed, 13 Nov 2002 19:34:24 +1100
> X-Message-Number: 1
>
> People...
>
> Since I have now finished the prototype I will now let you all know
> about my newly developed toy...
>
> What most people have concentrated on is Trackers, which transmit the
> positions from a GPS reciever to the world. I have developed almost
> exactly the oposite - a device the recieves APRS packets and uploads
> them to a GPS receiever without the need to a transmitting radio.
> Basically think of this as being like a D7 radio, without the radio or
> display.
>
> The reason I have done it this way is that there are times in public
> service events (or my consulting work) where we need to distribute APRS
> information out into the field - but where it is not appropriate to have
> transmitting stations, or laptops. So I have developed a device that
> will go between a scanner and a GPS reciever to do that.
>
> At the moment I am decoding AX-25 in an 16F84 IC, and feeding the serial
> stream into a 16F628. I am working on getting rid of the 16F84 but this
> might take a little time. I also have a MAX232 in there, but depending
> on the voltage I choose that might change model, or I might get rid of
> it all together. [I am pretty sure that 3V will not work for RS-232 high
> :-)]. I am looking at doing a PCB, but that might take some time... [I
> also want to do a surface mount version whe I get the bugs out...]
>
> Late last night I was informed that Garmin ETREX GPS recievers (but
> higher models are) are not compatible with this [Feel free to email
> GARMIN to complain that the ETREX does not have NMEA/NMEA interface mode
> - I was really annoyed when I found out]. I am going to have a look at
> doing a PIC to allow this unit to work with the GARMIN binary protocol.
> It does not look TOO hard, but you can never tell.
>
> Anyway some photos are available on
> http://radio-active.net.au/web/tracking/antitracker.html
>
> Darryl
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
> --
>
> Subject: Re: Newly Developed APRS Toy...
> From: David Beach <dbeach@blvl.igs.net>
> Date: Wed, 13 Nov 2002 20:09:55 -0500
> X-Message-Number: 2
>
> My congratulations on what seems (to me, at least, though I am more a casual
> APRS observer than user) a novel and sort of 'why didn't I think of that'
> idea! I have a GPSMAP 162 on my boat - maybe I will connect it up....
>
> I will keep an interested eye on your website as the project progresses.
>
> David Beach
> VE3STI
>
> > From: "Darryl Smith" <Darryl@radio-active.net.au>
> > Date: Wed, 13 Nov 2002 19:34:24 +1100
> > Subject: [picsig] Newly Developed APRS Toy...
> >
> > What most people have concentrated on is Trackers, which transmit the
> > positions from a GPS reciever to the world. I have developed almost
> > exactly the oposite - a device the recieves APRS packets and uploads
> > them to a GPS receiever without the need to a transmitting radio.
> > Basically think of this as being like a D7 radio, without the radio or
> > display.
> >
> > The reason I have done it this way is that there are times in public
> > service events (or my consulting work) where we need to distribute APRS
> > information out into the field - but where it is not appropriate to have
> > transmitting stations, or laptops. So I have developed a device that
> > will go between a scanner and a GPS reciever to do that.
>
> --

>
> Subject: APRS on GARMIN 176
> From: "Andrew Rich" <andrew.rich@bigpond.com>
> Date: Thu, 14 Nov 2002 11:10:42 +1000
> X-Message-Number: 3
>
> updated closeup
>
> www.tech-software.net
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to picsig as: jprouland@attbi.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
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49. [picsig] 12F675

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sat, 16 Nov 2002 19:26:09 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-107285-2002.11.16-03.12.11--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

People

Have anyone had any success uploading a program into a 12F675 from DOS.
I have been using PicPro16 (registered version) to upload a program, and
I am having a lot of hassles with it

Many thanks

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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50. [picsig] PIC-E-II PCB.....

From: John Morley <jmorley@endeavour-usa.com>
Date: Sun, 17 Nov 2002 12:03:29 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-107478-2002.11.17-11.47.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Gang,

I have posted a picture of the new PIC-E-II PCB prototype for anyone that's
interested. This time
the board is (mostly) stuffed with components. The URL to view the picture is:

http://www.endeavour-usa.com/images/PIC-E-II-PCB.jpg

Currently, the board has all the components installed with the exception of
the RJ jacks for the radio
and PIC-ICD connections, and the piezo beeper. I didn't like the style of
jacks I ordered from digikey,
so I'm going to try another type, and All Electronics sent the wrong
beeper. So far, everything looks
fine mechanically with one exception..... I neglected to account for the
"throw" of the pushbutton
switches, so they are located too close to the board edge. This means that
the current board will not
fit inside the chassis. Fortunately, everything else seems to be OK, so
these boards will be OK to verify
the circuit, and as test beds for code development. Once we determine that

the circuits are working correctly
we can make another board to verify the fit in the chassis. We could almost
skip that step, since we can
verify 90% of it right now with what we have..... I have already started
to check out the functionality
of the board, and I am pleased to report that the "power" LED illuminates
when +12V is applied and the
switch is turned ON! Hey, it's a start!!

John

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

51. [picsig] programming questions

From: MTWAL <MTWAL@cc.usu.edu>
Date: Mon, 18 Nov 2002 13:18:50 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-107672-2002.11.18-15.03.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I need help with a problem I am having with the PICF84. I am writing code to
compress the GPS data. I have the code working to poll a PIC-E and have it
respond with the GPS string. It currently just reads the (GPRMC) string into
a buffer until it is full, and then transmits. I am trying to change the code
to compress the GPS string and then send it.

I have a data look up table, similar to the one in Byon's NMEA code, that
holds the number of the characters to read in serially. When I call the data
table to get the number I never return from the call. I have commented out
the
addwf PCL, F line in the table and it will return. I have tried loading a
number into the W reg and then calling the table to make sure I have the
number in the W reg that I want, and it still doesn't work.

The table does not seem to be crossing the 256 mark in memory. And I have
tried moving the table around in the code to make sure that wasn't the
problem. And I checked the address in the list file.

I am stumped, though I haven't done much programming before. So this is not
surprising. Does anyone have any suggestions? I would greatly appreciate
them. I am banging my head on the walls late at night trying to solve this.

Thank you,

Matt
mtwal@cc.usu.edu

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52. [picsig] Re: programming questions

From: "Byon Garrabrant" <byon@byon.com>
Date: Mon, 18 Nov 2002 19:49:31 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-107725-2002.11.18-22.33.40--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Your table probably exists at an address greater than 0xFF. To
handle this, you need to setup the PCLATH register to do a jump.
Also, make sure the value of W is less than the length of the table.

Byon

On 18 Nov 2002 at 13:18, MTWAL wrote:

> I need help with a problem I am having with the PICF84. I am writing
> code to compress the GPS data. I have the code working to poll a
> PIC-E and have it respond with the GPS string. It currently just
> reads the (GPRMC) string into a buffer until it is full, and then
> transmits. I am trying to change the code to compress the GPS string
> and then send it.

>
> I have a data look up table, similar to the one in Byon's NMEA code,
> that holds the number of the characters to read in serially. When I
> call the data table to get the number I never return from the call. I
> have commented out the addwf PCL, F line in the table and it will
> return. I have tried loading a number into the W reg and then calling
> the table to make sure I have the number in the W reg that I want, and
> it still doesn't work.
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> have tried moving the table around in the code to make sure that
> wasn't the problem. And I checked the address in the list file.
>
> I am stumped, though I haven't done much programming before. So this
> is not surprising. Does anyone have any suggestions? I would greatly
> appreciate them. I am banging my head on the walls late at night
> trying to solve this.
>
> Thank you,
>
> Matt
> mtwal@cc.usu.edu
>
>
> ---
> You are currently subscribed to picsig as: byon@mail.com
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---
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53. [picsig] Re: CCS C Serial IO

From: "Tom, VA7TA" <tma@mail.island.net>
Date: Mon, 18 Nov 2002 21:53:28 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-107769-2002.11.19-00.39.30--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Greetings:

        I have not run across the term 'non-blocking' before but I presume it
means that if the USART TX buffer is found to be full during a 'send byte'
attempt the main program flow will not be held up in a wait loop until the
current byte transmission is completed. Is my presumptive understanding of
the definition of 'non-blocking' correct?

        I have written an asm program for the 16F877 in which as I recall 16 byte
buffers are provided for both TX and RX USART data. It uses buffer pointers
and when the buffer is full the program skips on to multitask other duties.
The interrupt routine accesses the buffer and sends out data until the
buffer is emptied. It seems to work OK as my serial port runs at 56Kb and
at least one of my commands gives it the acid test. It dumps all the RAM
banks in HEX thus the buffer is filled to the brim for a while.

        An overhead of RAM allocation would be needed to implement this code and
there is 877 bank switching involved which probably isn't a direct fit for
the 628.

        I don't know how well asm code integrates with CCS C but if your
interested send me an email.

73
Tom, VA7TA
tma@island.net

54. [picsig] RE: picsig digest: November 18, 2002

From: MTWAL <MTWAL@cc.usu.edu>
Date: Tue, 19 Nov 2002 01:18:35 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-107778-2002.11.19-03.02.50--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thank you Byon,

I loaded the PCLATH before the addwf PCL, F command and it solved the
problem.

I appreciate your help. I would have never figured that one out.

Matt
>--
>
>Subject: Re: programming questions
>From: "Byon Garrabrant" <byon@byon.com>
>Date: Mon, 18 Nov 2002 19:49:31 -0800
>X-Message-Number: 2
>
>Your table probably exists at an address greater than 0xFF. To
>handle this, you need to setup the PCLATH register to do a jump.
>Also, make sure the value of W is less than the length of the table.
>
>Byon
>
>On 18 Nov 2002 at 13:18, MTWAL wrote:
>
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>> code to compress the GPS data. I have the code working to poll a
>> PIC-E and have it respond with the GPS string. It currently just
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>> transmits. I am trying to change the code to compress the GPS string
>> and then send it.
>>
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>> that holds the number of the characters to read in serially. When I
>> call the data table to get the number I never return from the call. I
>> have commented out the addwf PCL, F line in the table and it will
>> return. I have tried loading a number into the W reg and then calling
>> the table to make sure I have the number in the W reg that I want, and
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>> appreciate them. I am banging my head on the walls late at night
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>> Thank you,
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>> Matt
>> mtwal@cc.usu.edu
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>
>
>
>
>---
>
>END OF DIGEST
>
>---
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Matt Waldron
245-2761
mtwal@cc.usu.edu

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55. [picsig] Re: CCS C Serial IO

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Tue, 19 Nov 2002 09:27:26 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-107798-2002.11.19-09.11.29--lyris.picsig#tapr.org@lists.tapr.org>

Rendered body type: text/plain

You are correct. Blocking refers to any call that doesn't return until a
service is complete. It can occur on any device, not just the UART. It is
typical for PIC implementations to block for the entire duration of a packet
transmission. This means that you can't receive GPS position updates while you
transmit. This is a practical compromise for a TNC that transmits only.

In most implementations, the GPS port serial interface is implemented in
software rather than with the PIC USART. This forces the call to block until
the byte is received. It is possible to implement drivers that don't block.
The CCS calls block.

The PIC-E-II software services the GPS input and output ports, either AX.25
transmit or receive, and the host computer interface transmit and receive ports
concurrently.

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Tom, VA7TA
> Sent: Tuesday, November 19, 2002 12:53 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Re: CCS C Serial IO
>
>
> Greetings:
>
>   I have not run across the term 'non-blocking' before but I presume it
> means that if the USART TX buffer is found to be full during a 'send byte'
> attempt the main program flow will not be held up in a wait loop until the
> current byte transmission is completed. Is my presumptive understanding of
> the definition of 'non-blocking' correct?
>
>   I have written an asm program for the 16F877 in which as I
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> and when the buffer is full the program skips on to multitask other duties.
> The interrupt routine accesses the buffer and sends out data until the
> buffer is emptied. It seems to work OK as my serial port runs at 56Kb and
> at least one of my commands gives it the acid test. It dumps all the RAM
> banks in HEX thus the buffer is filled to the brim for a while.
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>   An overhead of RAM allocation would be needed to implement this
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> there is 877 bank switching involved which probably isn't a direct fit for
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>   I don't know how well asm code integrates with CCS C but if your
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>
> 73
> Tom, VA7TA
> tma@island.net
>

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56. [picsig] CCS 'C' longs and floats..

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Thu, 21 Nov 2002 15:41:58 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-108049-2002.11.20-23.26.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

G'Day All....

I am attempting to do some work with CCS C, multiplying a 32 bit int by
1988.4197... And then breaking the result up and putting it into an
array.

I am actually getting 0x00 into the array... I have tried this under
Turbo C++ and it works. But under CCS, garmin[28]-> garmin[30] are all
0x00. I have tried printf-ing the value of mylong, but it seems that the

compiler just ignores that part of the line...

Any help would be appreciated. This is my the code I will be using to
upload positions in GARMIN format to an eTREX so I hope I can get it to
work.

Many thanks

Darryl

```
#include <16F628.h>
#use DELAY (clock=10000000, RESTART_WDT)
#use rs232 (BAUD=9600, xmit=PIN_B2, rcv=PIN_B1, ERRORS)
#fuses HS, NOWDT
#BIT TRMT = 0x98.1


void main (void)
{

char c;
char garmin[68];
char mycall [10];
char i;

int32 mylong;

char Buffer[] = "$GPWPL,1859.99,N,15559.99,W,NNCALL";



setup_comparator(NC_NC_NC_NC);
setup_ccp1(CCP_OFF);
setup_vref(FALSE);
/*setup_wdt(WDT_2304MS);*/
disable_interrupts(GLOBAL);



puts ("Copyright Darryl Smith VK2TDS 2002\n");
delay_ms (1000);

mylong = (((int32)Buffer[7]-'0')*10 + (int32)Buffer[8]-'0') * 6 * 1000;
mylong += (((int32)Buffer[9]-'0') * 1000) + ((int32)Buffer[10]-'0') *
100 +
 ((int32)Buffer[12]-'0') * 10 + ((int32)Buffer[13] -'0');

mylong = (int32)((float)mylong * (float)1988.4197851851851);

/* Still need to invert for South and West */


garmin[30] = (int32)mylong >> 24;
garmin[29] = (int32)(mylong >> 16) & 0xFF;
garmin[28] = (int32)(mylong >> 8) & 0xFF;
garmin[27] = 0x00;


while (1 == 1){
for (i = 0; i < 64; i++){
        delay_ms(10);
        while (!TRMT);
 putc (garmin[i]);

 }
        while (!TRMT);
        printf ("\n%x %x %x %x %x \n",c, garmin[27], garmin[28],
garmin[29], garmin[30]);
        delay_ms (1000);
 }
}
```

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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57. [picsig] RE: CCS 'C' longs and floats..

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Thu, 21 Nov 2002 09:09:03 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-108077-2002.11.21-08.53.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

What computation are you trying to do. There are a lot of ways to implement a function. If I understood what you're doing, I might be able to help.

I've found that CCS doesn't always generate correct code. Earlier versions of the compiler were pretty bad. As an example, the auto-increment didn't save the result. index++ would increment the variable, then throw the result away. This appears to be fixed in the last release, but I wouldn't be surprised if there are still bugs in there.

Rich Carter
Member of Technical Staff
Wind River Platforms Engineering
10 Tara Blvd SWT 330
Nashua NH 03062
603-897-2071 (voice)
603-897-2050 (fax)
www.windriver.com

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Darryl Smith
> Sent: Wednesday, November 20, 2002 11:42 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] CCS 'C' longs and floats..
>
>
> G'Day All....
>
> I am attempting to do some work with CCS C, multiplying a 32 bit int by
> 1988.4197... And then breaking the result up and putting it into an
> array.
>
> I am actually getting 0x00 into the array... I have tried this under
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> compiler just ignores that part of the line...
>
> Any help would be appreciated. This is my the code I will be using to
> upload positions in GARMIN format to an eTREX so I hope I can get it to
> work.
>
> Many thanks
>
> Darryl
>
> ----
> #include <16F628.h>
> #use DELAY (clock=10000000, RESTART_WDT)
> #use rs232 (BAUD=9600, xmit=PIN_B2, rcv=PIN_B1, ERRORS)
> #fuses HS, NOWDT
> #BIT TRMT = 0x98.1
>
>
> void main (void)
> {
>
> char c;
> char garmin[68];
> char mycall [10];
> char i;
>
> int32 mylong;
>
> char Buffer[] = "$GPWPL,1859.99,N,15559.99,W,NNCALL";
>
>

```
>
> setup_comparator(NC_NC_NC_NC);
> setup_ccp1(CCP_OFF);
> setup_vref(FALSE);
> /*setup_wdt(WDT_2304MS);*/
> disable_interrupts(GLOBAL);
>
>
>
> puts ("Copyright Darryl Smith VK2TDS 2002\n");
> delay_ms (1000);
>
> mylong = (((int32)Buffer[7]-'0')*10 + (int32)Buffer[8]-'0') * 6 * 1000;
> mylong += (((int32)Buffer[9]-'0') * 1000) + ((int32)Buffer[10]-'0') *
> 100 +
>  ((int32)Buffer[12]-'0') * 10 + ((int32)Buffer[13] -'0');
>
> mylong = (int32)((float)mylong * (float)1988.4197851851851);
>
> /* Still need to invert for South and West */
>
>
> garmin[30] = (int32)mylong >> 24;
> garmin[29] = (int32)(mylong >> 16) & 0xFF;
> garmin[28] = (int32)(mylong >> 8) & 0xFF;
> garmin[27] = 0x00;
>
>
> while (1 == 1){
> for (i = 0; i < 64; i++){
>       delay_ms(10);
>       while (!TRMT);
>  putc (garmin[i]);
>
>  }
>       while (!TRMT);
>       printf ("\n%x %x %x %x %x \n",c, garmin[27], garmin[28],
> garmin[29], garmin[30]);
>       delay_ms (1000);
>  }
> }
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
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---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
```

58. [picsig] Uploading to Garmin in BINARY format

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sun, 24 Nov 2002 20:14:37 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-108372-2002.11.24-04.00.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

People

An update. I have managed to work out how to upload a position to the GARMIN, my problem is that I need to multiply an INT32 by 1988.419785, and on a PIC that is not as easy as it sounds. I managed to write a line of code to do it, and it seems to work OK, but the problem is that the single line of code takes about half the ROM memory of the 16F628. And that is without any of the parsing code. I think that if anyone ever wants to do this it will require one of the bigger PIC processors, such as the 16F876

I have worked out that uploading data from a PIC to a GARMIN in binary format is feasable, but the parsing code is the pain. A project for me

to put on the backburner for a while... At least until I get some
16F876's :-)

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

59. [picsig] Re: Uploading to Garmin in BINARY format

From: Zack Clobes <zclobes@swbell.net>
Date: Sun, 24 Nov 2002 09:22:36 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-108398-2002.11.24-10.06.35--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Would you mind sharing the string(s) required to put a plot on a Garmin GPS?

I've been toying around with some similar ideas for a while to put a
high-altitude balloon on a handheld GPS for the recovery phase.

Zack Clobes, W0ZC
Project: Traveler
www.rckara.org/

----- Original Message -----
From: "Darryl Smith" <Darryl@radio-active.net.au>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Sunday, November 24, 2002 3:14 AM
Subject: [picsig] Uploading to Garmin in BINARY format

> People
>
> An update. I have managed to work out how to upload a position to the
> GARMIN, my problem is that I need to multiply an INT32 by 1988.419785,
> and on a PIC that is not as easy as it sounds. I managed to write a line
> of code to do it, and it seems to work OK, but the problem is that the
> single line of code takes about half the ROM memory of the 16F628. And
> that is without any of the parsing code. I think that if anyone ever
> wants to do this it will require one of the bigger PIC processors, such
> as the 16F876
>
> I have worked out that uploading data from a PIC to a GARMIN in binary
> format is feasable, but the parsing code is the pain. A project for me
> to put on the backburner for a while... At least until I get some
> 16F876's :-)
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> Darryl
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
> ---
> You are currently subscribed to picsig as: zclobes@swbell.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

60. [picsig] TAPR List Sponsorship

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Mon, 25 Nov 2002 09:37:40 +1100

To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: "TAPR Board of Directors" <tapr-board@lists.tapr.org>
Message-ID: <LYR6890-108443-2002.11.24-17.24.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

G'Day All

Thank you for reading this message. TAPR provides this mailing list
along with others as a service to their members and the Ham Radio
community in general. Providing this service and other services such as
our FTP site and the cost of developing new products like the Pic-E and
EasyTrak, costs money.

We are more than happy to provide these resources to the entire Ham
Radio community, but we do ask that you do concider joining TAPR. A good
way to see what we're up to is to take a look at the latest issue of our
quarterly journal, the _Packet_Status_Register_ which is available for
download at
http://www.tapr.org/PSR

Membership in TAPR is only US$20 regardless of whether you live in
Tuscon, Arizona, or Sydney, Australia. If you want to join, or if your
membership is coming up for renewal, please visit www.tapr.org on the
Web for details. Specifically you can go to the following page for
information
        http://www.tapr.org/tapr/html/Fmembership.html

Darryl Smith, VK2TDS
TAPR Board Member

P.S. I have recently joined the board as its first non-North American
board member. As part of my Board duties, I have agreed to have overall
responsibility for membership. If anyone has any questions or concerns
about membership or TAPR in general, please EMAIL me. I can also be
contacted by phone with prior arrangement

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
vk2tds@tapr.org | www.radio-active.net.au

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

61. [picsig] Membership

From: "CHIGA" <nh7s@hawaii.rr.com>
Date: Sun, 24 Nov 2002 19:13:20 -1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-108516-2002.11.25-00.01.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Darryl,

    I think I've been a TAPR member for about a year. The problem is that I
don't remember when I sent in my dues. Since the TAPR PSR isn't mailed, one
may not realize when his membership has expired. Is there a mechanism to
remind members to send in their dues? If not then maybe something on the
website should be made which will allow members to see if they are current.

    73 - Cal NH7S.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

62. [picsig] Re: Membership

From: John Ackermann   N8UR <jra@febo.com>
Date: Mon, 25 Nov 2002 07:53:13 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: tapr@tapr.org
Message-ID: <LYR6890-108546-2002.11.25-07.37.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Cal --

We have a membership renewal letter that *should* go out a few months prior
to expiration. That process got broken when we moved to a new office and
office manager last year, but it's getting back on track and we're sending
out renewal letters more-or-less quarterly now.

73,
John N8UR
jra@febo.com -- n8ur@tapr.org

--On Sunday, November 24, 2002 19:13:20 -1000 CHIGA <nh7s@hawaii.rr.com>
wrote:

>   Hi Darryl,
>
>   I think I've been a TAPR member for about a year. The problem is
> that I don't remember when I sent in my dues. Since the TAPR PSR isn't
> mailed, one may not realize when his membership has expired. Is there a
> mechanism to remind members to send in their dues? If not then maybe
> something on the website should be made which will allow members to see
> if they are current.
>
>   73 - Cal NH7S.
>
>
> ---
> You are currently subscribed to picsig as: jra@febo.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>
>

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

December 2002

Original source file: picsig.0212
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0212

1. [picsig] RE: Uploading to Garmin in BINARY format

```
From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Mon, 2 Dec 2002 09:40:21 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-109358-2002.12.02-09.24.34--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

Daryl
Don't use floating point to do the calculation. Use fixed point. With fixed point, you treat 1988.419785 as a binary number with the least significant bit having a weighted value. Your computation ends up being an integer operation. If you let me know exactly what you are trying to compute, I can help you out.

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Darryl Smith
> Sent: Sunday, November 24, 2002 4:15 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Uploading to Garmin in BINARY format
>
>
> People
>
> An update. I have managed to work out how to upload a position to the
> GARMIN, my problem is that I need to multiply an INT32 by 1988.419785,
> and on a PIC that is not as easy as it sounds. I managed to write a line
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> I have worked out that uploading data from a PIC to a GARMIN in binary
> format is feasable, but the parsing code is the pain. A project for me
> to put on the backburner for a while... At least until I get some
> 16F876's :-)
>
> Darryl
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
> ---
> You are currently subscribed to picsig as: KE1EV@ARRL.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] Authors Wanted for PSR and DCC...

```
From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Wed, 4 Dec 2002 17:05:40 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: "TAPR Board of Directors" <tapr-board@lists.tapr.org>,
        "TAPR APRS Special Interest Group" <aprssig@lists.tapr.org>,
        "htaprs digest recipients" <htaprs@lists.tapr.org>,
        "aprs sig \(aprs sig\)" <aprssig@tapr.org>,
        "'APRS Spec Discussion List'" <aprsspec@lists.tapr.org>,
        "'TAPR PIC Development Special Interest Group'" <picsig@lists.tapr.org>,
        "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>,
        "TAPR AO-16 APRS Special Interest Group" <ao16aprs@lists.tapr.org>
Message-ID: <LYR6890-109543-2002.12.04-00.53.35--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

G'Day

TAPR have decided to introduce some changes to support those members of TAPR who are putting time and energy into the various publications that TAPR puts out each year.

Three Month Membership Extension for Packet Status Register (PSR) Articles
---

>From the next issue of PSR, members who have articles published in the PSR magazine will have their membership of TAPR extended by three months. It is hoped that this will encourage members to write for the magazine. The deadline for articles for the next issue of PSR is mid-January. More information on submitting articles, and on obtaining copies of the magazine can be found on http://www.tapr.org/tapr/html/Fpsr.html

Six Month Membership Extension for Digital Communications Conference (DCC) Articles
---

>From the 2003 DCC, planned for somewhere in the Eastern USA, TAPR will be offering Six Month membership extensions for all members who have papers published in the proceedings. Whilst we would dearly love all authors of papers to attend the conference, we recognize that there are reasons that members cannot attend the conference - so the requirement is only on having your paper published. This is of course in addition to the complimentary copy of the DCC proceedings that each author is entitled to.

We are looking for papers on subject within the bounds of Digital Communications, as it applies to Ham Radio, on all levels. All you need is something to say. If you feel that you are unable to write a paper because you do not have the time, or writing a paper is outside your area of expertise, please contact me. I will attempt to find someone who will be able to help you with getting the paper written.

More details on the conference itself will be made available early in 2003, along with a formal call for papers. Until then you can examine the DCC area of the TAPR www site for details on past conferences by looking at http://www.tapr.org/dcc/

Darryl VK2TDS
TAPR Board Member

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] Magazine Roundup - Circuit Cellar Inc - December 2002.

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sat, 7 Dec 2002 10:49:39 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-109847-2002.12.06-18.34.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Circuit Cellar Inc (December 2002) - www.circuitcellar.com - has done their latest issue on WIRELESS COMMUNICATIONS

Articles include

- Wireless Data Acquisition using Bluetooth
- Interfacing with Frequency Synthesizers
- Vector SoC - 1 GHz Vectorial Network Analyzer
- Wireless Temperature Sensors - based on the Microchip RFpic IC

series.

        Smart RF Debugging - using SS modems in projects

For those that are not aware of Circuit Cellar magazine you may be
surprised to know that all the articles listed above include circuit
diagrams and usually have links to code. From the information in the
articles you can actually build the stuff. I would love to build the 1
GHz Vectorial Network Analyser - and then hack it to 2.5 GHz...

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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4. [picsig] Call For Assistance - Serial A/D Converter Project...

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sat, 14 Dec 2002 07:47:16 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-110931-2002.12.13-15.36.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

People

We are looking at doing a project based on the Serial A/D converter
design from Wolf DL4YHF. A sample design and some software is available
on http://www.qsl.net/dl4yhf/snd_utl1.html

The design is based on a PIC12F675 IC with Quad 10 bit A/D converters
(of which two are usable in this project). The idea is to take one or
two incoming audio streams and digitize them into a high speed serial
data stream - totally bypassing the soundcard.

Why? Well, the main reason is that some people find it a lot easier to
deal with a data stream from a serial port rather than a sound card.
Also some computers may not have a suitable sound card, or the sound
card may be already used.

Some of the tasks that will need to be completed include

        a. Determining what additional requirements are needed from the
design
                (anti-alias filters, PSU connection, In Circuit
programming, Max232?)
        b. PCB design
        c. Additional firmware (I have some available for use too)
        d. Additional source code in VB for the PC for experimentation
        e. Beta Test PCB's
        f. Instruction and Construction manual
        g. KIT production

I would anticipate that this kit would be affordable for almost anyone.
And for those that need USB, it will work via a SERIAL TO USB cable.

Comments?

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] Re: Call For Assistance - Serial A/D Converter Project...

From: Zack Clobes <zclobes@swbell.net>
Date: Fri, 13 Dec 2002 17:05:54 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-110943-2002.12.13-17.49.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'd be interested in helping with a project such as this.

I have experience in the following:
PIC16F8x(x) using the CCS compiler (I don't think my C compiler handles the
12F series though)
Serial I/O
PCB design/construction using photo-resist
VB 6.0 in OO, Serial I/O, database, file I/O
Desktop publishing and proof reading

Zack Clobes, W0ZC
Project: Traveler
www.rckara.org/

----- Original Message -----
From: "Darryl Smith" <Darryl@radio-active.net.au>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Friday, December 13, 2002 2:47 PM
Subject: [picsig] Call For Assistance - Serial A/D Converter Project...

> People
>
> We are looking at doing a project based on the Serial A/D converter
> design from Wolf DL4YHF. A sample design and some software is available
> on http://www.qsl.net/dl4yhf/snd_utl1.html
>
> The design is based on a PIC12F675 IC with Quad 10 bit A/D converters
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> data stream - totally bypassing the soundcard.
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> deal with a data stream from a serial port rather than a sound card.
> Also some computers may not have a suitable sound card, or the sound
> card may be already used.
>
> Some of the tasks that will need to be completed include
>
> a. Determining what additional requirements are needed from the
> design
> (anti-alias filters, PSU connection, In Circuit
> programming, Max232?)
> b. PCB design
> c. Additional firmware (I have some available for use too)
> d. Additional source code in VB for the PC for experimentation
> e. Beta Test PCB's
> f. Instruction and Construction manual
> g. KIT production
>
> I would anticipate that this kit would be affordable for almost anyone.
> And for those that need USB, it will work via a SERIAL TO USB cable.
>
> Comments?
>
> Darryl
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
> ---
> You are currently subscribed to picsig as: zclobes@swbell.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

6. [picsig] Re: Call For Assistance - Serial A/D Converter Project...

From: Jeff King <jeff@aerodata.net>
Date: Fri, 13 Dec 2002 23:24:44 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-110965-2002.12.13-23.10.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Zack:

Your CCS compiler "PCM" will work with the PIC12F675.

See: http://www.ccsinfo.com/devices.shtml

--
Jeff King, jeff@aerodata.net on 12/13/2002

On Fri, 13 Dec 2002 17:05:54 -0600, Zack Clobes wrote:
>I'd be interested in helping with a project such as this.
>
>I have experience in the following:
>PIC16F8x(x) using the CCS compiler (I don't think my C compiler
>handles the
>12F series though)
>Serial I/O
>PCB design/construction using photo-resist
>VB 6.0 in OO, Serial I/O, database, file I/O
>Desktop publishing and proof reading
>
>Zack Clobes, W0ZC
>Project: Traveler
>www.rckara.org/
>
>
>----- Original Message -----
>From: "Darryl Smith" <Darryl@radio-active.net.au>
>To: "TAPR PIC Development Special Interest Group"
><picsig@lists.tapr.org>
>Sent: Friday, December 13, 2002 2:47 PM
>Subject: [picsig] Call For Assistance - Serial A/D Converter
>Project...
>
>
>>People
>>
>>We are looking at doing a project based on the Serial A/D converter
>>design from Wolf DL4YHF. A sample design and some software is
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>>on http://www.qsl.net/dl4yhf/snd_utl1.html
>>
>>The design is based on a PIC12F675 IC with Quad 10 bit A/D
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>>(of which two are usable in this project). The idea is to take one
>>or
>>two incoming audio streams and digitize them into a high speed
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>>data stream - totally bypassing the soundcard.
>>
>>Why? Well, the main reason is that some people find it a lot easier
>>to
>>deal with a data stream from a serial port rather than a sound
>>card.
>>Also some computers may not have a suitable sound card, or the
>>sound
>>card may be already used.
>>
>>Some of the tasks that will need to be completed include
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>>a. Determining what additional requirements are needed from the
>>design
>>(anti-alias filters, PSU connection, In Circuit
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>>c. Additional firmware (I have some available for use too)
>>d. Additional source code in VB for the PC for experimentation
>>e. Beta Test PCB's
>>f. Instruction and Construction manual
>>g. KIT production

>>
>>I would anticipate that this kit would be affordable for almost
>>anyone.
>>And for those that need USB, it will work via a SERIAL TO USB
>>cable.
>>
>>Comments?
>>
>>Darryl
>>
>>---------
>>Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
>>Mobile Number 0412 929 634 [+61 4 12 929 634 International]
>>Darryl@radio-active.net.au | www.radio-active.net.au
>>
>>
>>
>>---
>>You are currently subscribed to picsig as: zclobes@swbell.net
>>To unsubscribe send a blank email to leave-picsig-
>>6948X@lists.tapr.org
>>
>
>
>---
>You are currently subscribed to picsig as: jeff@aerodata.net
>To unsubscribe send a blank email to leave-picsig-
>6948X@lists.tapr.org

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] Re: Call For Assistance - Serial A/D Converter Project...

From: Zack Clobes <zclobes@swbell.net>
Date: Fri, 13 Dec 2002 22:33:15 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-110966-2002.12.13-23.16.32--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Well it does look like the compiler will, but the version won't. I don't
have any include's for the 12F series. I'm still on version 2.730.

'bout time for an upgrade... :-/

Zack Clobes, W0ZC
Project: Traveler
www.rckara.org/

----- Original Message -----
From: "Jeff King" <jeff@aerodata.net>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Friday, December 13, 2002 10:24 PM
Subject: [picsig] Re: Call For Assistance - Serial A/D Converter Project...

Zack:

Your CCS compiler "PCM" will work with the PIC12F675.

See: http://www.ccsinfo.com/devices.shtml

--
Jeff King, jeff@aerodata.net on 12/13/2002

On Fri, 13 Dec 2002 17:05:54 -0600, Zack Clobes wrote:
>I'd be interested in helping with a project such as this.
>
>I have experience in the following:
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>handles the
>12F series though)
>Serial I/O
>PCB design/construction using photo-resist

>VB 6.0 in OO, Serial I/O, database, file I/O
>Desktop publishing and proof reading
>
>Zack Clobes, W0ZC
>Project: Traveler
>www.rckara.org/
>
>
>----- Original Message -----
>From: "Darryl Smith" <Darryl@radio-active.net.au>
>To: "TAPR PIC Development Special Interest Group"
><picsig@lists.tapr.org>
>Sent: Friday, December 13, 2002 2:47 PM
>Subject: [picsig] Call For Assistance - Serial A/D Converter
>Project...
>
>
>>People
>>
>>We are looking at doing a project based on the Serial A/D converter
>>design from Wolf DL4YHF. A sample design and some software is
>>available
>>on http://www.qsl.net/dl4yhf/snd_utl1.html
>>
>>The design is based on a PIC12F675 IC with Quad 10 bit A/D
>>converters
>>(of which two are usable in this project). The idea is to take one
>>or
>>two incoming audio streams and digitize them into a high speed
>>serial
>>data stream - totally bypassing the soundcard.
>>
>>Why? Well, the main reason is that some people find it a lot easier
>>to
>>deal with a data stream from a serial port rather than a sound
>>card.
>>Also some computers may not have a suitable sound card, or the
>>sound
>>card may be already used.
>>
>>Some of the tasks that will need to be completed include
>>
>>a. Determining what additional requirements are needed from the
>>design
>>(anti-alias filters, PSU connection, In Circuit
>>programming, Max232?)
>>b. PCB design
>>c. Additional firmware (I have some available for use too)
>>d. Additional source code in VB for the PC for experimentation
>>e. Beta Test PCB's
>>f. Instruction and Construction manual
>>g. KIT production
>>
>>I would anticipate that this kit would be affordable for almost
>>anyone.
>>And for those that need USB, it will work via a SERIAL TO USB
>>cable.
>>
>>Comments?
>>
>>Darryl
>>
>>---------
>>Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
>>Mobile Number 0412 929 634 [+61 4 12 929 634 International]
>>Darryl@radio-active.net.au | www.radio-active.net.au
>>
>>
>>
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>>6948X@lists.tapr.org
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>6948X@lists.tapr.org

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---
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8. [picsig] Magazine Roundup - Elektor Electronics - October 2002

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sun, 15 Dec 2002 15:57:13 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111087-2002.12.14-23.47.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here in Oz October Elector has just hit the shelves. Articles and Kits
include (www.elektor-electronics.co.uk)

        AT90S8535 Programmer
        Digital RF wattmeter based on a 16F876
(http://www.webx.dk/oz2cpu/radios/miliwatt.htm)
        16F84 Motorcycle Theft Alarm
        Information on the OBD-2 Car network port
        Sound Pressure Level Meter
        Accoustic VoltMeter
        Electronic Fuse
        USB Driver Programming

November Electronics World (formerly and Wireless world)

        WIDE Digital IO from the USB port
        TDA7000 Signal Strength Meter
        PIR Enhancement
        PIC in service programming
        RF Autotransformers line devices modelled in spice
        Capacitor Sound - Distortion added by capacitors in a circuit

If people find this useful, let me know, and I will continue to publish
this when I get the magazines

Darryl

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Darryl@radio-active.net.au | www.radio-active.net.au

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9. [picsig] CCS C Compiler....

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Mon, 16 Dec 2002 22:51:37 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111254-2002.12.16-06.37.50--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All...

I am having an issue with the CCS C Compiler and was hoping people on
the list can help. I have a program I am working on for a 16F876, which
has about 134bytes of global variables, main, two subroutines and an
Interrupt routine (INT 2)

I have just added one of the routines and a lot of variables and now it
wont compile - with an out of memory error. The CPU has 368 by bytes, or
0x170 I believe. I have attached the SYM file. The INTERRUPT_AREA from
0xFF->0x3ff looks strange.

The init code for the interrupts is...

```
        disable_interrupts(GLOBAL);
        setup_timer_2 (T2_DIV_BY_4, 130,1);
        enable_interrupts(int_timer2);
        enable_interrupts(GLOBAL);
```

I have included the SYM file below. I am out of my depth here. It looks as if there is a LOT of room being allocated for an interrupts, but I am not sure why...

HELP PLEASE...

Many thanks

Darryl

```
000     main.i
000     int_4800.@SCRATCH
000     tx.@SCRATCH
000     @DIV88.@SCRATCH
000     rx_ax25.@SCRATCH
000     main.@SCRATCH
005     PORTA
006     PORTB
007     PORTC
015-016 CCP_1
015     CCP_1_LOW
016     CCP_1_HIGH
01B-01C CCP_2
01B     CCP_2_LOW
01C     CCP_2_HIGH
020     @INTERRUPT_AREA
021     @INTERRUPT_AREA
022     @INTERRUPT_AREA
023     @INTERRUPT_AREA
024     @INTERRUPT_AREA
025     @INTERRUPT_AREA
026     @INTERRUPT_AREA
027     @INTERRUPT_AREA
028     ax25_bit_ctr
029     ax25_ctr
02A     ax25_pos_state
02B     ax25_pos
02C     ax25_num_bits
02D.0   ax25_got_fcs
02D.1   ax25_data_available
02E     ax25_state
02F     ax25_data_return
030     ax25
031     ax25_old
032     ax25_i
033     ax25_data
034     ax25_packetlength
035-03E ax25_to
03F-048 ax25_from
049-052 Callsign
053     CallsignPos
054-05D CallsignTo
05E     PayloadPos
05F     c
060     i
061     j
062     Offset
077     @SCRATCH
078     @SCRATCH
079     @SCRATCH
07A     @SCRATCH
07B     @SCRATCH
07F     @INTERRUPT_AREA
098.1   TRMT
0A0-0C7 Payload
0C8-0EF Buffer
0FF     @INTERRUPT_AREA
17F     @INTERRUPT_AREA
1FF     @INTERRUPT_AREA
```

```
27F     @INTERRUPT_AREA
2FF     @INTERRUPT_AREA
37F     @INTERRUPT_AREA
3FF     @INTERRUPT_AREA
        _RETURN_
        delay_ms1.P1
        delay_us1.P2
        @DIV88.P3
        @DIV88.P4
        rx_ax25.i
        @PRINTF_D_9600_62_63.P1
        @PRINTF_D_9600_62_63.P2

0135  badexitnocomment
0135  badexit
0135  init

Project Files:
pack876.c
C:\PROGRA~1\PICC\devices\16F876.h

---------
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Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au



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```

10. [picsig] Re: CCS C Compiler....

From: Jeff King <jeff@aerodata.net>
Date: Mon, 16 Dec 2002 10:59:50 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111287-2002.12.16-11.45.13--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Try making your functions smaller if possible. You likely have a few that
extend across a bank or two.

Quoting Darryl Smith <Darryl@radio-active.net.au>:

> Hi All...
>
> I am having an issue with the CCS C Compiler and was hoping people on
> the list can help. I have a program I am working on for a 16F876,
> which
> has about 134bytes of global variables, main, two subroutines and an
> Interrupt routine (INT 2)
>
> I have just added one of the routines and a lot of variables and now
> it
> wont compile - with an out of memory error. The CPU has 368 by bytes,
> or
> 0x170 I believe. I have attached the SYM file. The INTERRUPT_AREA from
> 0xFF->0x3ff looks strange.
>
>
> The init code for the interrupts is...
>   disable_interrupts(GLOBAL);
>   setup_timer_2 (T2_DIV_BY_4, 130,1);
>   enable_interrupts(int_timer2);
>   enable_interrupts(GLOBAL);
>
> I have included the SYM file below. I am out of my depth here. It
> looks
> as if there is a LOT of room being allocated for an interrupts, but I
> am
> not sure why...
>
> HELP PLEASE...
>
> Many thanks
>
> Darryl

```
>
>
>
> 000     main.i
> 000     int_4800.@SCRATCH
> 000     tx.@SCRATCH
> 000     @DIV88.@SCRATCH
> 000     rx_ax25.@SCRATCH
> 000     main.@SCRATCH
> 005     PORTA
> 006     PORTB
> 007     PORTC
> 015-016 CCP_1
> 015     CCP_1_LOW
> 016     CCP_1_HIGH
> 01B-01C CCP_2
> 01B     CCP_2_LOW
> 01C     CCP_2_HIGH
> 020     @INTERRUPT_AREA
> 021     @INTERRUPT_AREA
> 022     @INTERRUPT_AREA
> 023     @INTERRUPT_AREA
> 024     @INTERRUPT_AREA
> 025     @INTERRUPT_AREA
> 026     @INTERRUPT_AREA
> 027     @INTERRUPT_AREA
> 028     ax25_bit_ctr
> 029     ax25_ctr
> 02A     ax25_pos_state
> 02B     ax25_pos
> 02C     ax25_num_bits
> 02D.0   ax25_got_fcs
> 02D.1   ax25_data_available
> 02E     ax25_state
> 02F     ax25_data_return
> 030     ax25
> 031     ax25_old
> 032     ax25_i
> 033     ax25_data
> 034     ax25_packetlength
> 035-03E ax25_to
> 03F-048 ax25_from
> 049-052 Callsign
> 053     CallsignPos
> 054-05D CallsignTo
> 05E     PayloadPos
> 05F     c
> 060     i
> 061     j
> 062     Offset
> 077     @SCRATCH
> 078     @SCRATCH
> 079     @SCRATCH
> 07A     @SCRATCH
> 07B     @SCRATCH
> 07F     @INTERRUPT_AREA
> 098.1   TRMT
> 0A0-0C7 Payload
> 0C8-0EF Buffer
> 0FF     @INTERRUPT_AREA
> 17F     @INTERRUPT_AREA
> 1FF     @INTERRUPT_AREA
> 27F     @INTERRUPT_AREA
> 2FF     @INTERRUPT_AREA
> 37F     @INTERRUPT_AREA
> 3FF     @INTERRUPT_AREA
>         _RETURN_
>         delay_ms1.P1
>         delay_us1.P2
>         @DIV88.P3
>         @DIV88.P4
>         rx_ax25.i
>         @PRINTF_D_9600_62_63.P1
>         @PRINTF_D_9600_62_63.P2
>
> 0135  badexitnocomment
> 0135  badexit
> 0135  init
>
```

> Project Files:
> pack876.c
> C:\PROGRA~1\PICC\devices\16F876.h
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
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11. [picsig] Re: CCS C Compiler....

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Tue, 17 Dec 2002 21:08:52 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111357-2002.12.17-04.59.16--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks to those who responded...

The first thing I needed to do was
        #include <16F876.h>
        #device *=16

The 2nd line is the one I added to use larger pointers to RAM access,
increasing the size of the code

This fixed the main problem.

I also needed to add a
        #separate
Immediately before one of the functions to fix a rom problem

Darryl

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Mobile Number 0412 929 634 [+61 4 12 929 634 International]
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12. [picsig] Re: CCS C Compiler....

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Tue, 17 Dec 2002 09:17:58 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111373-2002.12.17-09.03.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You should avoid #device *=16 if possible. It will cause the compiler to
generate quite a lot of code. CCS provides support functions to access the
second half of RAM. I suggest that you use these instead.

Rich Carter
Member of Technical Staff
Wind River Platforms Engineering
10 Tara Blvd SWT 330
Nashua NH 03062
603-897-2071 (voice)
603-897-2050 (fax)
www.windriver.com

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org

> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Darryl Smith
> Sent: Tuesday, December 17, 2002 5:09 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Re: CCS C Compiler....
>
>
> Thanks to those who responded...
>
> The first thing I needed to do was
>   #include <16F876.h>
>   #device *=16
>
> The 2nd line is the one I added to use larger pointers to RAM access,
> increasing the size of the code
>
> This fixed the main problem.
>
> I also needed to add a
>   #separate
> Immediately before one of the functions to fix a rom problem
>
> Darryl
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
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> Darryl@radio-active.net.au | www.radio-active.net.au
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13. [picsig] CCS 'C' and the status register...

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Thu, 19 Dec 2002 08:22:23 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111553-2002.12.18-16.11.50--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

People

I am attempting to use John Hansen's FCS code from the 2000 and 1998 DCC
conferences... I am having a problem with one piece of the code. The
segment is below.

```
                                #asm
                                        BCF 03,0
                                        RRF fcshi, F
                                        RRF fcslo, F
                                #endasm
                                if ((( status & 0x01)^(bt)) == 0x01) {
                                        fcshi = fcshi ^ 0x84;
                                        fcslo = fcslo ^ 0x08;
                                }
```

The problem is that when I compile this for a PIC 16F876, it will not
compile, since it says that STATUS is an unknown identifier. I guess
STATUS is really the status register of the status register. The
question is, how do I get this to work?

Many thanks

Darryl

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Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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14. [picsig] Re: CCS 'C' and the status register...

From: Zack Clobes <zclobes@swbell.net>
Date: Wed, 18 Dec 2002 15:42:30 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111554-2002.12.18-16.26.07--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

There's preprocessor definition you need:

#byte STATUS=3

You can download my ax25 include file from
www.rckara.org/project_traveler/2002d and click on the Controller software
link at the bottom of the page. It compiles nicely on a 'F876.

Zack Clobes, W0ZC
Project: Traveler
www.rckara.org/

----- Original Message -----
From: "Darryl Smith" <Darryl@radio-active.net.au>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Wednesday, December 18, 2002 3:22 PM
Subject: [picsig] CCS 'C' and the status register...

> People
>
> I am attempting to use John Hansen's FCS code from the 2000 and 1998 DCC
> conferences... I am having a problem with one piece of the code. The
> segment is below.
>
> #asm
> BCF 03,0
> RRF fcshi, F
> RRF fcslo, F
> #endasm
> if (((status & 0x01)^(bt)) == 0x01) {
> fcshi = fcshi ^ 0x84;
> fcslo = fcslo ^ 0x08;
> }
>
> The problem is that when I compile this for a PIC 16F876, it will not
> compile, since it says that STATUS is an unknown identifier. I guess
> STATUS is really the status register of the status register. The
> question is, how do I get this to work?
>
> Many thanks
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> Darryl
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15. [picsig] Re: CCS 'C' and the status register...

From: James Jefferson <jjeffers@aprsworld.net>
Date: Wed, 18 Dec 2002 15:42:02 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111558-2002.12.18-16.31.08--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Check in your processors datasheet for the memory address of the status
register.

then do

#byte status=THE_MEMORY_ADDRESS_YOU_JUST_FOUND

I think the status register is 03 on the 'F84 and the 'F628

I think John also references a port_b ... map the port_b register (usually
0x06) the same way and change the pin he is bit testing to the pin you are
using.

-Jim

On Wednesday 18 December 2002 03:22 pm, you wrote:
> People
>
> I am attempting to use John Hansen's FCS code from the 2000 and 1998 DCC
> conferences... I am having a problem with one piece of the code. The
> segment is below.
>
>   #asm
>   BCF 03,0
>   RRF fcshi, F
>   RRF fcslo, F
>   #endasm
>   if (((status & 0x01)^(bt)) == 0x01) {
>   fcshi = fcshi ^ 0x84;
>   fcslo = fcslo ^ 0x08;
>   }
>
> The problem is that when I compile this for a PIC 16F876, it will not
> compile, since it says that STATUS is an unknown identifier. I guess
> STATUS is really the status register of the status register. The
> question is, how do I get this to work?
>
> Many thanks
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> Darryl
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
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16. [picsig] RE: CCS 'C' and the status register...

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Thu, 19 Dec 2002 09:30:25 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111660-2002.12.19-09.15.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

STATUS referes to the status register. It should be defined in a header file
somewhere. Mine is defined in pic1687x.h. Here's the definition I use

#byte   STATUS = 0X03;

Rich Carter
Member of Technical Staff
Wind River Platforms Engineering
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Nashua NH 03062
603-897-2071 (voice)
603-897-2050 (fax)
www.windriver.com

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Darryl Smith
> Sent: Wednesday, December 18, 2002 4:22 PM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] CCS 'C' and the status register...
>
>
> People
>
> I am attempting to use John Hansen's FCS code from the 2000 and 1998 DCC
> conferences... I am having a problem with one piece of the code. The
> segment is below.
>
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>   RRF fcshi, F
>   RRF fcslo, F
>   #endasm
>   if (((status & 0x01)^(bt)) == 0x01) {
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> The problem is that when I compile this for a PIC 16F876, it will not
> compile, since it says that STATUS is an unknown identifier. I guess
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> question is, how do I get this to work?
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> Darryl
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> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
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17. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Fri, 20 Dec 2002 16:50:44 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: "'TAPR PIC Development Special Interest Group'" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111753-2002.12.20-00.43.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

People

Seems to me like there is a possible project. A multi-port ethernet TNC
- that is if people are up the challenge.

Rabbit Semiconductor has a number of PLUG IN CPU/ETHERNET modules, which
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ready built. They come with a 10/100 mBit ethernet... And for an
organisation like TAPR we could buy the CPU modules on demand, and plug
them in as required.

More details on the core modules is available on
        http://www.rabbitsemiconductor.com/products/coreModules.html

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ports are good for high speed, and for low speed you can use bit
bashing. The CPU load on having 4 paralell RX or TX is not much more
than having a single one.

To do a project like this TAPR needs people. I would love to do it, but
I don't have any RabbitCore development boards, and I suspect that I
have enough things on my plate.

Proposal
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        4-6 1200 bps Modems (based on MX614) with TNC-2 sockets
        2-6 two wire RS-232 IO ports (opt)
        Serial IP configuration through one serial port if an IO pin is
HIGH
        TCP/IP software so that an APRS server could telnet into this
box and get APRS packets
        4" x 6" PCB

Who is up for this project...

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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18. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: "Andrew Rich" <andrew.rich@bigpond.com>
Date: Fri, 20 Dec 2002 21:08:48 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111766-2002.12.20-05.54.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Why don't TNC's have MAC addresses ?

-----Original Message-----
From: bounce-picsig-28143@lists.tapr.org
[mailto:bounce-picsig-28143@lists.tapr.org]On Behalf Of Darryl Smith
Sent: Friday, 20 December 2002 15:51
To: TAPR PIC Development Special Interest Group
Cc: 'TAPR PIC Development Special Interest Group'
Subject: [picsig] Re: Ethernet vs USB - Ethernet Wins?

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Darryl@radio-active.net.au | www.radio-active.net.au

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---
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19. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: Doug Bade <doug@clecom.com>
Date: Fri, 20 Dec 2002 08:05:08 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: "'TAPR PIC Development Special Interest Group'" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111768-2002.12.20-07.51.02--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I dug out my tcpip rabbit development kit and will take a look into what it
is going to take, some parts are written already, I just have zero C coding
experience to speak of... No promises...

Doug KB8GVQ

At 04:50 PM 12/20/2002 +1100, Darryl Smith wrote:
>People
>Seems to me like there is a possible project. A multi-port ethernet TNC
>- that is if people are up the challenge.
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20. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: Zack Clobes <zclobes@swbell.net>
Date: Fri, 20 Dec 2002 07:22:31 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111769-2002.12.20-08.08.24--lyris.picsig#tapr.org@lists.tapr.org>

>From a balloon chaser's perspective - it would be great to have a single device that combined multiple TNCs/Comm Ports. In my car, I have a GPS, a TNC, and would like to have another serial output device (kind of a heads-up-display), as well as a second TNC to operate on a separate frequency (either 440MHz packet, or PSK on HF/VHF).

Just my thoughts....

Zack Clobes, W0ZC
Project: Traveler
www.rckara.org/

----- Original Message -----
From: "Andrew Rich" <andrew.rich@bigpond.com>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Friday, December 20, 2002 5:08 AM
Subject: [picsig] Re: Ethernet vs USB - Ethernet Wins?

> Why don't TNC's have MAC addresses ?
>
> -----Original Message-----
> From: bounce-picsig-28143@lists.tapr.org
> [mailto:bounce-picsig-28143@lists.tapr.org]On Behalf Of Darryl Smith
> Sent: Friday, 20 December 2002 15:51
> To: TAPR PIC Development Special Interest Group
> Cc: 'TAPR PIC Development Special Interest Group'
> Subject: [picsig] Re: Ethernet vs USB - Ethernet Wins?
>
>
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>
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21. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: Jeff King <jeff@aerodata.net>
Date: Fri, 20 Dec 2002 10:48:33 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111780-2002.12.20-11.34.04--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Talk to Wes Johnston, he has done some work with the Rabbit and APRS.

Also, the Dallas TINI, Dale Seaburg has done some work with it and APRS.

But I think the Rabbit is more well suited to hard real time although the TINI
is more rich in applications. I'm doing a project on the TINI now, but using
the PIC for the hard realtime stuff (talking to a short range 900mhz radio).

But this is a great idea Darryl.

Regards,

Jeff

Quoting Darryl Smith <Darryl@radio-active.net.au>:

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> TNC
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22. [picsig] Re: [aprssig] Re: Ethernet vs USB - Ethernet Wins?

From: Adi Linden <adil@adis.on.ca>
Date: Fri, 20 Dec 2002 13:37:04 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: TAPR APRS Special Interest Group <aprssig@lists.tapr.org>,
        "'TAPR PIC Development Special Interest Group'" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111798-2002.12.20-14.18.31--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Darryl,

> - that is if people are up the challenge.
> Seems to me like there is a possible project. A multi-port ethernet TNC

I played briefly with an Atmel AT90S8515 and some ATmega CPU's and a
Realtek ethernet controller (same is used in the RabbitCore). There is
a all integrated ethernet controller available from Crystal as well. I
haven't invested too much time into this yet. I briefly worked on an
embedded ethernet project but left it for the future in favour of getting
an IRLP node and APRS iGate and digipeater up and running. I mostly read
up on the intricate details of TCP/IP, UDP and open source development
tools that support Atmel.

I looked at the Rabbit product and decided to go Atmel instead. For the
most part this was based on my unwillingness to purchase proprietary
development tools, when a just as powerful microcontroller has open
source development tools available. Also, in my case, all my workstations
are Linux, I don't use Windows. When I looked at the Rabbit, no Linux
development tools were available. Yet another reason to not go that route.

I am very interested in this project, it really goes hand in hand with
what I am trying to accomplish now using Baycom type hardware and multiple
serial ports. Using ethernet instead of serial interfaces would most
certainly greatly increase the flexibility of running multiple TNC's on
the same computer. I'd prefer not to purchase a Rabbit Development Kit
and use Windows as a development platform, though.

For ethernet connectivity there are a few prebuilt ethernet modules
available that allow a microcontroller to be connected to ethernet, here
are some of these resources:

Hardware (Ethernet):
http://www.embeddedethernet.com/
http://www.edtp.com/
http://www.siteplayer.com/
http://www.netburner.com/

Herdware (Atmel & Ethernet):
http://www.ethernut.de/en/
http://avr.jpk.co.nz/eavr/eavr.html

Code:
http://dunkels.com/adam/uip/
http://www.sics.se/~adam/lwip/index.html

Regards,
Adi
va3adi

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23. [picsig] Hello

From: Adi Linden <adil@adis.on.ca>
Date: Fri, 20 Dec 2002 22:04:38 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111867-2002.12.20-22.50.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

Just wondering if my email makes it here... a previous post didn't.

Adi

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24. [picsig] PROPOSAL : Ethernet 4-port TNC

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sat, 21 Dec 2002 18:51:24 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111905-2002.12.21-02.43.35--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

People.

There is some interest in an ETHERNET TNC based on the RABBIT
SEMICONDUCTOR CPU's. If you want to participate, please contact me
directly. I will then work out how we do this.

Darryl VK2TDS
TAPR BOARD

Ethernet Enabled multi-port TNC based on a Rabbit processor.

Scope of Project
1. Develop an interface board for the RabbitCore TCP/IP processor
modules with embedded Ethernet with the following interfaces
   a. Up to FOUR 1200 bps modem ports with MX-614's, PTT
hardware, TNC-2 5-pin DIN sockets, Input and Output level adjustment
   b. Two (Four) RS-232 level two wire serial ports (depending
on RabbitCore chosen).
   c. One TTL level serial port with optional RS-485
   d. LED's on Front panel for activity indication
   e. Programming Port so that no special cables are needed
2. Develop Software for this device
   a. Bit Bash-ed AX-25 I/O
   b. TCP/IP server with different IP port for each physical
port
   c. AX-25 reception
   d. AX-25 over TCP/IP & Ethernet

Hardware

The Rabbit Semiconductor (http://www.rabbitsemiconductor.com/index.html)

RabbitCore processor modules are to be used for this project. The reason is that this means that no surface mount work is needed to get the CPU working. It also means that the CPU CORE can be purchased on demand rather than during kit production.

I am proposing that the board accept either the older or newer RabbitCore modules by having two sets of headers.

10/100 RabbitCore 3000 $89
10 RabbitCore 3000 $79
10 RabbitCore 2000 $59

The capabilities of the 3000 series modules includes
. 10/100Base-T Ethernet
. Rabbit 3000T microprocessor at 44.2 MHz
. 3.3 V operation
. Low-EMI
. 512K Flash
. 512K SRAM (program), 256K SRAM (data)
. 52 digital I/O
. 6 serial ports (IrDA, SDLC/HDLC, Async, SPI)

Available Software

Some of the needed software has already been written and just needs to be integrated. This code includes

1. Telnet SERVER code with the Dynamic C compiler
2. AX25 receive code - Darryl VK2TDS

The software needs to be integrated and expanded.

Software Stages

1. TCP/IP server
2. Serial Configuration Port
3. TCP/IP Configuration Port
4. AX.25 reception - Single Port
5. TCP/IP Server on multiple ports
6. AX.25 reception on multiple ports.
7. UPROTO transmission of packets on single port
8. UPROTO transmission on multiple ports

Somewhere about this stage the product would be released, and it would be hoped that the ham radio community could complete the final stages. They would be

9. Connected Mode reception
10. Connected Mode transmission
11. TNC command set through telnet.

Development Kits

Many amateurs already own a Rabbit 'C' Compiler and can program these devices themselves. For those that cannot, a full kit of 'C' compiler, Core Module, Prototyping Board, Plugpack can be purchased for $299/349 depending on the model.

Deliverables

1. Prototype PCB design
2. Schematic
3. Working CODE
4. User Manual
5. Construction Manual

Resources Required

At this stage the required resources are unknown. We would anticipate that there be 1-2 versions of the prototype PCB constructed before the product is released. Thanks to the nature of this product it is not anticipated that there would be any advantage in going for a formal BETA release of the product once the board is designed and working.

Options for Sale

A number of options exist for the eventual release of this kit. They
include
.   Parts and PCB only, without CPU Core
.   Full KIT

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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25. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: Dale Seaburg <kg5lt@earthlink.net>
Date: Sat, 21 Dec 2002 11:57:27 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111939-2002.12.21-12.43.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks Jeff, but the major effort for APRS (jeAPRS) on the TINI goes to
Gregg Wonderly. I simply ported his code to the TINI sometime ago. I
then did some meager work on the weather packet interpretation - I
attempted to flesh out what Gregg had established as a framework.
Nothing of any consequence. Lack of time has prevented further Java
development.

That being said, this does seem like a nice idea. I agree with Adi's
comments on the Atmel. At least there are free (except for the user's
time involved) software development tools for the Atmel series of uP's.
  This applies both for the Windoze and Linux communities. I'd say
within the next three months as gcc 3.3 settles down, we'll see some
rather nice avr-gcc tools. If you're willing to be on the
bleeding-edge, you can get CVS snapshots now of the future of
open-source tools for the Atmel line of mircos.

What I'm seeing more and more and more is an interest in developing an open TNC
that most anyone with some kit building skill can put together. The
PIC-E was a good start. The next generation kit is now needed.

73 - Dale. KG5LT

Jeff wrote:

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Also, the Dallas TINI, Dale Seaburg has done some work with it and APRS.

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26. [picsig] FS: Rabbit TCP/IP Development Kit

From: "n7tcf" <n7tcf@cox.net>
Date: Sat, 21 Dec 2002 15:28:17 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111964-2002.12.21-17.13.59--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm ready to part with my Rabbit TCP/IP Development kit. I'll take $125,
plus whatever shipping costs to your location. It was very gently used.
Please email me off list.

It consists of the main board, an I/O (buttons and LEDs) Demo board, the CD,
programming cable and I think a power supply. I may have to search for the
power supply.

I like the Rabbit concept quite a bit. The hardware is affordable, but the
initial cost of the Dynamic C compiler ($395US) puts it beyond my hobby
budget. The TCP/IP kit compiler is limited to programming only the included
board. Otherwise it will do anything the full version can.

You can see the kit's spec's at the Rabbit website,

http://www.rabbitsemiconductor.com/products/rab20_tcpip/rab20_tcpip_devkit.h
tml

Note the price, $199US. I will consider a trade for a Warp13 and CSS C
combo.

Again, please respond off-list if interested.

Jim Sullivan
N7TCF

Web page: http://www.qsl.net/n7tcf
Weather Station: http://members.cox.net/n7tcfweather

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27. [picsig] RE: FS: Rabbit TCP/IP Development Kit

From: "Andrew Rich" <andrew.rich@bigpond.com>
Date: Sun, 22 Dec 2002 08:31:25 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-111966-2002.12.21-17.17.02--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This may sound realy silly, but i have done what the rabbit does with a linux computer

using netcat

cat /dev/ttyS0 | nc -p 4000

Andrew

-----Original Message-----
From: bounce-picsig-28143@lists.tapr.org
[mailto:bounce-picsig-28143@lists.tapr.org]On Behalf Of n7tcf

Sent: Sunday, 22 December 2002 08:28
To: TAPR PIC Development Special Interest Group
Subject: [picsig] FS: Rabbit TCP/IP Development Kit

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Note the price, $199US. I will consider a trade for a Warp13 and CSS C
combo.

Again, please respond off-list if interested.

Jim Sullivan
N7TCF

Web page: http://www.qsl.net/n7tcf
Weather Station: http://members.cox.net/n7tcfweather

You are currently subscribed to picsig as: andrew.rich@bigpond.com
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

28. [picsig] New packet decoder

From: "Mike Berg" <mikeberg@tds.net>
Date: Mon, 23 Dec 2002 20:15:08 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112227-2002.12.23-21.01.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Greetings to the group.
I thought I'd pass along the link to a webpage detailing
my latest PIC based packet decoder.
It isn't based on the PIC-E, but instead is a standalone unit
with a very low parts count. In tests here, it's performance
rivals my AEA and MFJ tncs for sensitivity and exceeds
the PIC-E versions I wrote a couple of years back.

http://personalpages.tds.net/~mikeberg/packet/

73's
Mike Berg   N0QBH

29. [picsig] Tracking Yachts

From: "Andrew Rich" <andrew.rich@bigpond.com>
Date: Tue, 24 Dec 2002 16:44:13 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112247-2002.12.24-01.29.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

http://www.rolexsydneyhobart.com/yacht_tracker_how.asp?key=0.10103

30. [picsig] Tracking Yachts (2)

From: "Andrew Rich" <andrew.rich@bigpond.com>
Date: Tue, 24 Dec 2002 17:06:31 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Cc: "Peter and Heather" <heathernpeter@dnet.aunz.com>
Message-ID: <LYR6890-112249-2002.12.24-01.52.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

http://www.edchq.com/images/inmarsatprodsheet.pdf

-----Original Message-----
From: bounce-picsig-28143@lists.tapr.org
[mailto:bounce-picsig-28143@lists.tapr.org]On Behalf Of Andrew Rich
Sent: Tuesday, 24 December 2002 16:44
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Tracking Yachts

http://www.rolexsydneyhobart.com/yacht_tracker_how.asp?key=0.10103

31. [picsig] New PIC packet decoder

From: "Mike Berg" <mikeberg@tds.net>
Date: Tue, 24 Dec 2002 06:35:49 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112265-2002.12.24-07.21.59--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just noticed the 1st posting was in rich text format.
Here is the same message in plain text. Sorry bout that...

Greetings to the group.
I thought I'd pass along the link to a webpage detailing
my latest PIC based packet decoder.
It isn't based on the PIC-E, but instead is a standalone unit
with a very low parts count. In tests here, it's performance
rivals my AEA and MFJ tncs for sensitivity and exceeds
the PIC-E versions I wrote a couple of years back.

http://personalpages.tds.net/~mikeberg/packet/

73's
Mike Berg   N0QBH

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

32. [picsig] RE: New packet decoder

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Tue, 24 Dec 2002 09:37:58 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112279-2002.12.24-09.23.28--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm sure that you received lots of messages about the pic-e-II project, so
you must be aware that we've been working on it for a while. Why didn't you
work with us to help move along the PIC-E-II?

Rich
KE1EV

  -----Original Message-----
  From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Mike Berg
  Sent: Monday, December 23, 2002 9:15 PM
  To: TAPR PIC Development Special Interest Group
  Subject: [picsig] New packet decoder

  Greetings to the group.
  I thought I'd pass along the link to a webpage detailing
  my latest PIC based packet decoder.
  It isn't based on the PIC-E, but instead is a standalone unit
  with a very low parts count. In tests here, it's performance
  rivals my AEA and MFJ tncs for sensitivity and exceeds
  the PIC-E versions I wrote a couple of years back.

  http://personalpages.tds.net/~mikeberg/packet/

  73's
  Mike Berg   N0QBH

33. [picsig] RE: Tracking Yachts (2)

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Tue, 24 Dec 2002 09:37:59 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112280-2002.12.24-09.23.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I don't see a connection to PIC developement.

Rich
KE1EV

  -----Original Message-----
  From: bounce-picsig-21297@lists.tapr.org
[mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Andrew Rich
  Sent: Tuesday, December 24, 2002 2:07 AM
  To: TAPR PIC Development Special Interest Group
  Cc: Peter and Heather
  Subject: [picsig] Tracking Yachts (2)

  http://www.edchq.com/images/inmarsatprodsheet.pdf

  -----Original Message-----
  From: bounce-picsig-28143@lists.tapr.org
[mailto:bounce-picsig-28143@lists.tapr.org]On Behalf Of Andrew Rich
  Sent: Tuesday, 24 December 2002 16:44
  To: TAPR PIC Development Special Interest Group
  Subject: [picsig] Tracking Yachts

  http://www.rolexsydneyhobart.com/yacht_tracker_how.asp?key=0.10103

34. [picsig] Re: New PIC packet decoder

From: Timothy J Salo <tjs@tc.umn.edu>
Date: Tue, 24 Dec 2002 11:49:02 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112301-2002.12.24-12.34.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> To: picsig@lists.tapr.org
> Subject: Re: [picsig] New PIC packet decoder
>
> From: "Mike Berg" <mikeberg@tds.net>
> Subject: [picsig] New PIC packet decoder
> Date: Tue, 24 Dec 2002 06:35:49 -0600
>
> I thought I'd pass along the link to a webpage detailing
> my latest PIC based packet decoder.
>   [...]
> http://personalpages.tds.net/~mikeberg/packet/

Mike,

I like your project Web pages. They appear to be clear and complete.
It also looks like you are making your source code and hardware
freely available.

A couple of free suggestions (worth everything you paid for them):

You might put more extensive administrative comments in your source code.
You might consider including:

o Your name (as well as call)

o The name of the person, if other than you, that wrote the
   previous version of the code (I think it was you, but...)

o A license statement that clearly gives others permission to
   use, modify and redistribute your code. This will ensure that
   others understand that your intent is for them to be able to
   [legally] use your code and that you will [hopefully] receive
   credit for your work.

   - I happen to particularly like BSD-style licenses for this purpose.
      The BSD license pretty much lets others do anything they want with
      your code, as long as they spell your name right (see, for example,
      http://www.opensource.org/licenses/bsd-license.php).

      (By the way, I think that one could argue that this is the
      license that helped create the Internet. The BSD networking code

is the basis for a substantial percentage of all of the TCP
implementations in existence. Of particular importance was the
BSD license, which permitted the use of the BSD networking code
in commercial products and didn't try to force all derivative
works to be open source.)

Thanks again for your nice Web pages and contribution to the ham and
low-cost APRS device communities.

-tjs

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

35. [picsig] RE: New packet decoder

From: "Mike Berg" <mikeberg@tds.net>
Date: Wed, 25 Dec 2002 08:11:05 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112380-2002.12.25-08.57.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

My intent isn't to upstage the PIC-E group.
I simply offer the decoder as a PIC project that may prove useful
to folks who like building electronic stuff.
As to working with a group - I prefer flying solo these days...

However, the code is open source and if some of it would be of use to
the project, feel free to use it.

This brings me to the reply from Timothy J Salo - thanks!
I'll attempt to make the next version easier to follow with more comments
and I like your suggestions regarding the BSD license.
I'm going to be moving my webpages to a different web host after the
new year. I plan to add the licence and disclaimer to all the project
programs I've wrote. If anyone's interested, drop a note and I'll send
you the new link when it becomes availible.
73
Mike Berg   N0QBH

>I'm sure that you received lots of messages about the pic-e-II project, so
>you must be aware that we've been working on it for a while. Why didn't
>you
>work with us to help move along the PIC-E-II?

>Rich
>KE1EV

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36. [picsig] Re: RE: New packet decoder

From: Jim Chandler <jim@chandler.net>
Date: Wed, 25 Dec 2002 08:34:56 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112384-2002.12.25-09.20.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Mike,

I'm definitely interested. Thanks for the great work.

Jim

On Wed, 25 Dec 2002 08:11:05 -0600
"Mike Berg" <mikeberg@tds.net> wrote:

> My intent isn't to upstage the PIC-E group.
> I simply offer the decoder as a PIC project that may prove useful
> to folks who like building electronic stuff.
> As to working with a group - I prefer flying solo these days...
>
> However, the code is open source and if some of it would be of use to
> the project, feel free to use it.
>
> This brings me to the reply from Timothy J Salo - thanks!
> I'll attempt to make the next version easier to follow with more comments

> and I like your suggestions regarding the BSD license.
> I'm going to be moving my webpages to a different web host after the
> new year. I plan to add the licence and disclaimer to all the project
> programs I've wrote. If anyone's interested, drop a note and I'll send
> you the new link when it becomes availible.
> 73
> Mike Berg   N0QBH
>
> >I'm sure that you received lots of messages about the pic-e-II project, so
> >you must be aware that we've been working on it for a while. Why didn't
> >you
> >work with us to help move along the PIC-E-II?
>
> >Rich
> >KE1EV
>
>
> ---
> You are currently subscribed to picsig as: jim@chandler.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

37. [picsig] Re: New packet decoder

From: Jeff King <jeff@aerodata.net>
Date: Wed, 25 Dec 2002 16:03:06 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112410-2002.12.25-15.49.05--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dittos. Great job Mike.

-Jeff wb8wka

--
Jeff King, jeff@aerodata.net on 12/25/2002

On Wed, 25 Dec 2002 08:34:56 -0600, Jim Chandler wrote:
>Mike,
>
>I'm definitely interested. Thanks for the great work.
>
>Jim
>
>On Wed, 25 Dec 2002 08:11:05 -0600
>"Mike Berg" <mikeberg@tds.net> wrote:
>
>> My intent isn't to upstage the PIC-E group.
>> I simply offer the decoder as a PIC project that may prove useful
>> to folks who like building electronic stuff.
>> As to working with a group - I prefer flying solo these days...
>>
>> However, the code is open source and if some of it would be of use to
>> the project, feel free to use it.
>>
>> This brings me to the reply from Timothy J Salo - thanks!
>> I'll attempt to make the next version easier to follow with more comments
>> and I like your suggestions regarding the BSD license.
>> I'm going to be moving my webpages to a different web host after the
>> new year. I plan to add the licence and disclaimer to all the project
>> programs I've wrote. If anyone's interested, drop a note and I'll send
>> you the new link when it becomes availible.
>> 73
>> Mike Berg   N0QBH
>>
>> >I'm sure that you received lots of messages about the pic-e-II project,
so
>> >you must be aware that we've been working on it for a while. Why didn't
>> >you
>> >work with us to help move along the PIC-E-II?
>>
>> >Rich
>> >KE1EV
>>
>>
>> ---

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>> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>---
>You are currently subscribed to picsig as: jeff@aerodata.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

38. [picsig] RE: RE: New packet decoder

From: "Andrew Rich" <andrew.rich@bigpond.com>
Date: Thu, 26 Dec 2002 08:06:25 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112419-2002.12.25-16.52.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Mike, may i please place a short article and link to your page on my page ?

www.tech-software.net

-----Original Message-----
From: bounce-picsig-28143@lists.tapr.org
[mailto:bounce-picsig-28143@lists.tapr.org]On Behalf Of Mike Berg
Sent: Thursday, 26 December 2002 00:11
To: TAPR PIC Development Special Interest Group
Subject: [picsig] RE: New packet decoder

My intent isn't to upstage the PIC-E group.
I simply offer the decoder as a PIC project that may prove useful
to folks who like building electronic stuff.
As to working with a group - I prefer flying solo these days...

However, the code is open source and if some of it would be of use to
the project, feel free to use it.

This brings me to the reply from Timothy J Salo - thanks!
I'll attempt to make the next version easier to follow with more comments
and I like your suggestions regarding the BSD license.
I'm going to be moving my webpages to a different web host after the
new year. I plan to add the licence and disclaimer to all the project
programs I've wrote. If anyone's interested, drop a note and I'll send
you the new link when it becomes availible.
73
Mike Berg   N0QBH

>I'm sure that you received lots of messages about the pic-e-II project, so
>you must be aware that we've been working on it for a while. Why didn't
>you
>work with us to help move along the PIC-E-II?

>Rich
>KE1EV

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

39. [picsig] Re: RE: New packet decoder

From: Gary Sanders <gls0@earthlink.net>
Date: Wed, 25 Dec 2002 19:52:27 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112442-2002.12.25-19.38.24--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Mike Berg wrote:
> If anyone's interested, drop a note and I'll send

> you the new link when it becomes availible.

Yes definitely! Let me know when you have the new URL.

Gary Sanders

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

40. [picsig] Re: New packet decoder

From: Mark Bender <mbender@ix.netcom.com>
Date: Wed, 25 Dec 2002 19:09:51 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112447-2002.12.25-21.44.34--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Mike,

I would also be interested. Thanks for you efforts.

Mark

Jeff King wrote:

> Dittos. Great job Mike.
>
> -Jeff wb8wka
>
> --
> Jeff King, jeff@aerodata.net on 12/25/2002
>
> On Wed, 25 Dec 2002 08:34:56 -0600, Jim Chandler wrote:
> >Mike,
> >
> >I'm definitely interested. Thanks for the great work.
> >
> >Jim
> >
> >On Wed, 25 Dec 2002 08:11:05 -0600
> >"Mike Berg" <mikeberg@tds.net> wrote:
> >
> >> My intent isn't to upstage the PIC-E group.
> >> I simply offer the decoder as a PIC project that may prove useful
> >> to folks who like building electronic stuff.
> >> As to working with a group - I prefer flying solo these days...
> >>
> >> However, the code is open source and if some of it would be of use to
> >> the project, feel free to use it.
> >>
> >> This brings me to the reply from Timothy J Salo - thanks!
> >> I'll attempt to make the next version easier to follow with more comments
> >> and I like your suggestions regarding the BSD license.
> >> I'm going to be moving my webpages to a different web host after the
> >> new year. I plan to add the licence and disclaimer to all the project
> >> programs I've wrote. If anyone's interested, drop a note and I'll send
> >> you the new link when it becomes availible.
> >> 73
> >> Mike Berg   N0QBH
> >>
> >> >I'm sure that you received lots of messages about the pic-e-II project,
> >so
> >> >you must be aware that we've been working on it for a while. Why didn't
> >> >you
> >> >work with us to help move along the PIC-E-II?
> >>
> >> >Rich
> >> >KE1EV
> >>
> >>
> >> ---
> >> You are currently subscribed to picsig as: jim@chandler.net
> >> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
> >
> >---

> >You are currently subscribed to picsig as: jeff@aerodata.net
> >To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
> ---
> You are currently subscribed to picsig as: mbender@ix.netcom.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

41. [picsig] Re: New packet decoder

From: "Joao Pissarro" <ct1dbh@netcabo.pt>
Date: Thu, 26 Dec 2002 23:43:45 -0000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112541-2002.12.26-18.29.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Me too.

Thanks, ct1dbh
Joao Pissarro
----- Original Message -----
From: "Gary Sanders" <gls0@earthlink.net>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Thursday, December 26, 2002 12:52 AM
Subject: [picsig] Re: RE: New packet decoder

> Mike Berg wrote:
> > If anyone's interested, drop a note and I'll send
> > you the new link when it becomes availible.
>
>
> Yes definitely! Let me know when you have the new URL.
>
> Gary Sanders
>
>
>
>
> ---
> You are currently subscribed to picsig as: ct1dbh@netcabo.pt
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

42. [picsig] Magazine Roundup - Elektor Electronics - November 2002

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Fri, 27 Dec 2002 17:27:28 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112576-2002.12.27-01.18.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

www.elektor-electronics.co.uk

The projects and articles in the latest Elektor magazine are

        Eprom Emulator - Programmed in an Eprom Programmer
        Vehicle Diagnostic Adapter - OBD-2
        LED Torch - With power saving technology
        Making double side PCB's
        Speed Cameras - How they work
        Telephone Based baby monitor

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

43. [picsig] Multi port KISS tnc?

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sat, 28 Dec 2002 17:32:42 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112690-2002.12.28-01.24.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

People

I am after some advice... How would people suggest I go about a four
port KISS tnc. I am thinking of using ACKed MULTIPORT KISS - with a 9600
or higher serial port.

The issue I am having is that although the CPU power on PIC processors
is good enough, they don't have enough memory to hold input and output
buffers. I think that I need about 4K of RAM. I don't really like the
idea of going for a Static Ram IC (6264) connected to a PIC... I need
about 1200 bytes/sec throughput through the RAM chip, as well as doing
other processing...

Does anyone have any brilliant ideas?

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

44. [picsig] Re: Multi port KISS tnc?

From: John Hansen <hansen@fredonia.edu>
Date: Sat, 28 Dec 2002 08:36:18 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112701-2002.12.28-08.33.58--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>buffers. I think that I need about 4K of RAM. I don't really like the
>idea of going for a Static Ram IC (6264) connected to a PIC... I need
>about 1200 bytes/sec throughput through the RAM chip, as well as doing
>other processing...
>
>Does anyone have any brilliant ideas?

How about either a Ramtron FM24C256 or a Ramtron FM25CL64? Both are 8 pin
serial devices that hold 8K of data. The 24 runs at 1 MHz while the 25
runs at 20 MHz. They both support 10 billion read/write cycles. They used
to have the 24 in a DIP package, but it looks now like they've gone all
surface mount for these. Still, installation of 8 pin surface mount isn't
all that difficult.

John W2FS

>Darryl
>
>---------
>Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
>Mobile Number 0412 929 634 [+61 4 12 929 634 International]
>Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
>---
>You are currently subscribed to picsig as: hansen@fredonia.edu
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

45. [picsig] TNC MIC E ETC

From: "BILL FROVIK" <n0mnb@email.msn.com>
Date: Sat, 28 Dec 2002 11:22:12 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112724-2002.12.28-12.08.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

NOT NEW BUT BEEN AWAY FOR A WHILE. CAN ANYONE UP DATE ME ON WHATS BEING USED FOR TNC'S THESE DAYS
OTHER THAN KPC-3.. IVE BEEN READING UP ON THESE PIC'S AND SOUND LIKE QUITE THE DEAL.

THANKS
BILL/N0MNB

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.422 / Virus Database: 237 - Release Date: 11/20/2002

46. [picsig] Magazine Roundup - Silicon Chip - Jan 2003

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sun, 29 Dec 2002 15:50:35 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112778-2002.12.28-23.40.20--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Silicon Chip Magazine - www.siliconchip.com.au

        Reader/Progreammer for Smart Cards - Mainly for 16F84 based
smart cards
        The Silicon Chip ETA 480 50W Amplifier
        A "Tiptronic-Style" Gear Indicator
        Active three way crossover for loudspeakers

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

47. [picsig] Re: Multi port KISS tnc

From: Dale Seaburg <kg5lt@earthlink.net>
Date: Sun, 29 Dec 2002 08:28:22 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112814-2002.12.29-09.15.08--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

John Hansen wrote:

 >Darryl Smith wrote:
 >>buffers. I think that I need about 4K of RAM. I don't really like the
 >>idea of going for a Static Ram IC (6264) connected to a PIC... I need
 >>about 1200 bytes/sec throughput through the RAM chip, as well as doing
 >>other processing...
 >>
 >>Does anyone have any brilliant ideas?

 >How about either a Ramtron FM24C256 or a Ramtron FM25CL64? Both are 8
 >pin
 >serial devices that hold 8K of data. The 24 runs at 1 MHz while the 25

The 24C256 is a 32Kb device, John. I have a couple of them. They are
i2c interface devices, where as the 25 series are SPI interface. The
HamHUD uses the FM25640 - an 8kb device. Nice!

I would strongly recommend them over the 6264 SRAM.

>runs at 20 MHz. They both support 10 billion read/write cycles. They
>used
>to have the 24 in a DIP package, but it looks now like they've gone all
>surface mount for these. Still, installation of 8 pin surface mount
>isn't
>all that difficult.

Dale Seaburg
KG5LT

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48. [picsig] RE: Multi port KISS tnc?

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Mon, 30 Dec 2002 09:23:16 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112964-2002.12.30-09.09.11--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Darryl
We used an 8Kbyte FRAM chip on the PIC-E-II. It uses the SPI bus. Accesses
take about 50us/byte.

Rich Carter
Member of Technical Staff
Wind River Platforms Engineering
10 Tara Blvd SWT 330
Nashua NH 03062
603-897-2071 (voice)
603-897-2050 (fax)
www.windriver.com

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Darryl Smith
> Sent: Saturday, December 28, 2002 1:33 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Multi port KISS tnc?
>
>
> People
>
> I am after some advice... How would people suggest I go about a four
> port KISS tnc. I am thinking of using ACKed MULTIPORT KISS - with a 9600
> or higher serial port.
>
> The issue I am having is that although the CPU power on PIC processors
> is good enough, they don't have enough memory to hold input and output
> buffers. I think that I need about 4K of RAM. I don't really like the
> idea of going for a Static Ram IC (6264) connected to a PIC... I need
> about 1200 bytes/sec throughput through the RAM chip, as well as doing
> other processing...
>
> Does anyone have any brilliant ideas?
>
> Darryl
>
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> Darryl@radio-active.net.au | www.radio-active.net.au
>
>
>
> ---
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> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

49. [picsig] RE: Multi port KISS tnc?

From: John Hansen <hansen@fredonia.edu>
Date: Mon, 30 Dec 2002 10:12:34 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-112970-2002.12.30-10.12.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

And for what it's worth Ramtrom now has a couple of chips out that support
unlimited read/write cycles.

At 09:23 AM 12/30/02 -0500, you wrote:
>Darryl
>We used an 8Kbyte FRAM chip on the PIC-E-II. It uses the SPI bus. Accesses
>take about 50us/byte.
>
>Rich Carter
>Member of Technical Staff
>Wind River Platforms Engineering
>10 Tara Blvd SWT 330
>Nashua NH 03062
>603-897-2071 (voice)
>603-897-2050 (fax)
>www.windriver.com

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

January 2003

Original source file: picsig.0301
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0301

1. [picsig] N0QBH PIC decoder...

From: "Mike Berg" <mikeberg@tds.net>
Date: Wed, 1 Jan 2003 13:27:20 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113230-2003.01.01-14.14.45--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here's the PIC decoder page at my new home on the web.

http://www.ringolake.com/pic_proj/decoder/rx_206.html

There's been a couple of part value changes to the MX-614
front end that seemed to improve performance. Also, one fellow
said his printout of the schematic was blurry - any sugestions on
how I can improve that? I presently print out the schematic from
Orcad Capture lite then scan it to a JPG file.

73 & Happy New Year
Mike Berg N0QBH

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] Re: N0QBH PIC decoder...

From: James Jefferson <jjeffers@aprsworld.net>
Date: Wed, 1 Jan 2003 13:44:48 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113233-2003.01.01-14.31.43--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Mike - Happy new year!

If you have any way to print the schematic to PDF that would be the best. But
for Windows that will probably require having Adobe Acrobat.

Alternatively you can do this:

Install an Apple Color LaserWriter 12/600 printer with the port being "FILE:"

Select the printer you just created as the output device from Orcad. That
will generate a Postscript file. If you have a linux box you can use ps2pdf
and convert it to a PDF without any loss of resolution. Or you can send me
the postscript file and I would be happy to convert it for you.

-Jim

On Wednesday 01 January 2003 01:27 pm, you wrote:
> Here's the PIC decoder page at my new home on the web.
>
> http://www.ringolake.com/pic_proj/decoder/rx_206.html
>
> There's been a couple of part value changes to the MX-614
> front end that seemed to improve performance. Also, one fellow
> said his printout of the schematic was blurry - any sugestions on
> how I can improve that? I presently print out the schematic from
> Orcad Capture lite then scan it to a JPG file.
>
> 73 & Happy New Year
> Mike Berg N0QBH
>
> ---
> You are currently subscribed to picsig as: jjeffers@aprsworld.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] Re: N0QBH PIC decoder...

From: Zack Clobes <zclobes@swbell.net>
Date: Wed, 01 Jan 2003 14:29:02 -0600

To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113236-2003.01.01-15.22.54--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Try this:
http://www.pdf995.com/

----- Original Message -----
From: "James Jefferson" <jjeffers@aprsworld.net>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Wednesday, January 01, 2003 1:44 PM
Subject: [picsig] Re: N0QBH PIC decoder...

> Mike - Happy new year!
>
> If you have any way to print the schematic to PDF that would be the best.
But
> for Windows that will probably require having Adobe Acrobat.
>
> Alternatively you can do this:
>
> Install an Apple Color LaserWriter 12/600 printer with the port being
"FILE:"
>
> Select the printer you just created as the output device from Orcad. That
> will generate a Postscript file. If you have a linux box you can use
ps2pdf
> and convert it to a PDF without any loss of resolution. Or you can send me
> the postscript file and I would be happy to convert it for you.
>
> -Jim
>
> On Wednesday 01 January 2003 01:27 pm, you wrote:
> > Here's the PIC decoder page at my new home on the web.
> >
> > http://www.ringolake.com/pic_proj/decoder/rx_206.html
> >
> > There's been a couple of part value changes to the MX-614
> > front end that seemed to improve performance. Also, one fellow
> > said his printout of the schematic was blurry - any sugestions on
> > how I can improve that? I presently print out the schematic from
> > Orcad Capture lite then scan it to a JPG file.
> >
> > 73 & Happy New Year
> > Mike Berg N0QBH
> >
> > ---
> > You are currently subscribed to picsig as: jjeffers@aprsworld.net
> > To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
> ---
> You are currently subscribed to picsig as: zclobes@swbell.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] Re: N0QBH PIC decoder...

From: Jeff King <jeff@aerodata.net>
Date: Wed, 1 Jan 2003 16:07:24 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113239-2003.01.01-15.53.50--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

PDF is good as others have suggested or GIF/PNG would work. The problem with
JPG is it is lossy compression.... doesn't work well with line drawings. GIF
and PNG are not lossy, hence your lines will be crisp.

JPG is well suited for photographs.

--
Jeff King, jeff@aerodata.net on 1/1/2003

On Wed, 1 Jan 2003 13:27:20 -0600, Mike Berg wrote:

>Here's the PIC decoder page at my new home on the web.
>
>http://www.ringolake.com/pic_proj/decoder/rx_206.html
>
>There's been a couple of part value changes to the MX-614
>front end that seemed to improve performance. Also, one fellow
>said his printout of the schematic was blurry - any sugestions on
>how I can improve that? I presently print out the schematic from
>Orcad Capture lite then scan it to a JPG file.
>
>73 & Happy New Year
>Mike Berg N0QBH
>
>---
>You are currently subscribed to picsig as: jeff@aerodata.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] Re: N0QBH PIC decoder...

From: "Kelly Kohls" <kkohls@prodigy.net>
Date: Wed, 1 Jan 2003 19:40:43 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113269-2003.01.01-20.27.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Another PDF print driver....

http://www.fineprint.com/

Kelly Kohls, N5TLE
Dallas, Texas
- There's never enough time to do it right, but plenty of time to do it
over.
- We've been asked to do more with less for so long that soon we'll be doing
everything
with nothing.

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6. [picsig] Re: N0QBH PIC decoder...

From: Gary Sanders <gls0@earthlink.net>
Date: Wed, 01 Jan 2003 22:45:34 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113280-2003.01.01-22.31.44--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If you only have one document to convert, you can do it online at
Adobe's web site here:

https://createpdf.adobe.com/index.pl/3083956455.63261?BP=NS6&v=AHP

Although there's a big 'sign-in' box prominently displayed on the page,
there's also a 'Try it for free' box near the bottom of the page, which
takes you to a registration screen.

I haven't tried it myself, but the price is right.......

Gary Sanders

Kelly Kohls wrote:
> Another PDF print driver....
>
> http://www.fineprint.com/

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] Making better schematics...

From: "Mike Berg" <mikeberg@tds.net>
Date: Thu, 2 Jan 2003 20:43:57 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113386-2003.01.02-21.30.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

My thanks to the many suggestions from the group.
What worked best was to download http://www.pdf995.com/
and install it to my schematic computer running Orcad Lite (also free).
I then select pdf955 as my printer and my schematic is saved as a
.pdf file which is about 1/8 the size of my previous .jpg files and
much, much better in quality. A real win, win situation :)

I've changed the most of the .zip files on my website to the PDF
schematics and have left the visible schematics as jpg for brouser
viewing.
http://www.ringolake.com/pic_proj/decoder/rx_206.html

73
Mike Berg N0QBH

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

8. [picsig] RE: Making better schematics...

From: "Lee De Vries" <LDEVRIES@gordontafe.edu.au>
Date: Fri, 3 Jan 2003 20:39:54 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113421-2003.01.03-04.26.13--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just to throw in my pennies worth!

Another nice way to document circuits is to use Eagle by Cadsoft. http://www.cadsoft.de/ This is also a Lite version of a CAD package with autorouter etc. (I could not find the Lite version of ORCAD on the ORCAD site)

I nice way to distribute projects would be the code + the CAD files (software + circuit + PCB) This would allow lots of experimentation.

Regards,
Lee de Vries VK3PK

> -----Original Message-----
> From: Mike Berg [mailto:mikeberg@tds.net]
> Sent: Fri 3/01/2003 1:43 PM
> To: TAPR PIC Development Special Interest Group
> Cc:
> Subject: [picsig] Making better schematics...
>
> My thanks to the many suggestions from the group.
> What worked best was to download http://www.pdf995.com/
> and install it to my schematic computer running Orcad Lite (also free).
> I then select pdf955 as my printer and my schematic is saved as a
> .pdf file which is about 1/8 the size of my previous .jpg files and
> much, much better in quality. A real win, win situation :)
>
> I've changed the most of the .zip files on my website to the PDF
> schematics and have left the visible schematics as jpg for brouser
> viewing.
> http://www.ringolake.com/pic_proj/decoder/rx_206.html
>
> 73
> Mike Berg N0QBH
>
> ---
> You are currently subscribed to picsig as: ldevries@gordontafe.edu.au
> To unsubscribe send a blank email to leave-picsig-26949W@lists.tapr.org

[Attachment: winmail.dat; application/ms-tnef; 5,066 bytes]

9. [picsig] Get Published and Extend Your TAPR Membership!

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Fri, 03 Jan 2003 08:52:25 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113449-2003.01.03-08.45.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR members:

The editorial board of Packet Status Register (PSR, the quarterly Newsletter
of TAPR) is now soliciting articles, news items, etc. for the next issue of
the newsletter. Topics related to digital Amateur Radio will be given
preference and the editorial board reserves the right to determine what is
suitable for publication.

As a bonus, if your contribution is published in PSR, your TAPR membership
will be extended by 3 months.

E-mail your contributions to wa1lou@tapr.org ASAP because the deadline for
the next issue of the newsletter is January 26.

73,

Stan Horzepa, WA1LOU, PSR Editor

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

10. [picsig] tnc options

From: "BILL FROVIK" <n0mnb@email.msn.com>
Date: Fri, 3 Jan 2003 11:50:45 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113483-2003.01.03-12.36.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

would like any info on whats around for use with aprs, i also have a doppler system i'd like to use with
 it.
other than a kpc-3 ..

73's n0mnb

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.422 / Virus Database: 237 - Release Date: 11/20/2002

11. [picsig] Re: N0QBH PIC decoder...

From: Klaus Hirschelmann <k.hirschelmann@mainz.netsurf.de>
Date: Sat, 04 Jan 2003 00:07:38 +0100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113513-2003.01.03-17.53.24--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Mike,
when trying to assemble file RX206627.ASM (using MPASM), there was an
error in line 81. "SPBRG" is claimed as previously not being defined and
also P16F627.INC seems not to contain THIS type of symbol.

BTW: compared to this, i could find "SPBRG" within e.g. P16F873.INC and
P16F876.INC

Do you have an idea?

73 & Happy New Year
Klaus DJ7OO

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12. [picsig] re:PIC packet decoder

From: "Mike Berg" <mikeberg@tds.net>
Date: Sat, 4 Jan 2003 07:30:38 -0600

To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113585-2003.01.04-08.17.08--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I just checked my versions of 16F627 and 16F628 .INC files
and they both include the definition for SPBRG as 99h.
My guess is that there may be older versions of these files that
are incomplete.
Best bet would be to download the latest version of MPLAB
at www.microchip.com - tho it's a BIG file.
I'll add the PIC16F627.INC file to the zip file on my webpage too.
73 Mike N0QBH

>Subject: Re: N0QBH PIC decoder...
>Hi Mike,
>when trying to assemble file RX206627.ASM (using MPASM), there >was an
>error in line 81. "SPBRG" is claimed as previously not being defined and
>also P16F627.INC seems not to contain THIS type of symbol.

>BTW: compared to this, i could find "SPBRG" within e.g. P16F873.INC >and
>P16F876.INC

>Do you have an idea?

>73 & Happy New Year
>Klaus DJ7OO

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13. [picsig] atmega ui tnc

From: Henry Carl Ott <carlott@interport.net>
Date: Mon, 06 Jan 2003 20:31:51 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113902-2003.01.06-20.17.26--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Everybody seems to be ether in the process of designing, or posting their
packet decoder designs.
  I guess I'll throw my design into the ring.

   Not a KISS TNC.
   Not a PIC-E clone.
   Not a Tiny Tracker clone.

   Not quite sure what it is.

   The top most link on my projects page:
   http://users.rcn.com/carlott/projects.htm

  Looking for feedback.

Regards,
  Henry Carl Ott N2RVQ

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

14. [picsig] Re: atmega ui tnc

From: "Marcelo Puhl" <mark@cpovo.net>
Date: Mon, 06 Jan 2003 23:49:10 -0200
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113905-2003.01.06-20.35.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Try this:

http://users.rcn.com/carlott/projects.html

Mark

On 6 Jan 2003 at 20:31, Henry Carl Ott wrote:

>   Everybody seems to be ether in the process of designing, or posting their
> packet decoder designs.
>   I guess I'll throw my design into the ring.
>
>   Not a KISS TNC.
>   Not a PIC-E clone.
>   Not a Tiny Tracker clone.
>
>   Not quite sure what it is.
>
>   The top most link on my projects page:
>   http://users.rcn.com/carlott/projects.htm
>
>   Looking for feedback.
>
> Regards,
>   Henry Carl Ott N2RVQ
>
>
>
> ---
> You are currently subscribed to picsig as: mark@cpovo.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

15. [picsig] Re: atmega ui tnc

From: Henry Carl Ott <carlott@interport.net>
Date: Mon, 06 Jan 2003 21:12:23 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113910-2003.01.06-20.58.08--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 11:49 PM 1/6/2003, you wrote:

>Try this:
>
>http://users.rcn.com/carlott/projects.html
>
>Mark

  Dang, I hate when cut and paste clips chars (actually it's my fault of)
  Now, either will work.
   Thanks for the head up.

-carl   N2RVQ

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

16. [picsig] Re: atmega ui tnc

From: Zack Clobes <zclobes@swbell.net>
Date: Mon, 06 Jan 2003 21:23:34 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-113916-2003.01.06-22.09.49--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm glad you shared this - I'm working on porting my PIC-based 1200 baud
modem to an Atmel AtMega128. Hopefully I will have more information
available on my website in the next month or two.

Zack Clobes, W0ZC
Project: Traveler
www.rckara.org

Marcelo Puhl wrote:

>Try this:
>
>http://users.rcn.com/carlott/projects.html

>
>Mark
>
>On 6 Jan 2003 at 20:31, Henry Carl Ott wrote:
>
>
>
>> Everybody seems to be ether in the process of designing, or posting their
>>packet decoder designs.
>> I guess I'll throw my design into the ring.
>>
>>   Not a KISS TNC.
>>   Not a PIC-E clone.
>>   Not a Tiny Tracker clone.
>>
>>   Not quite sure what it is.
>>
>>   The top most link on my projects page:
>>   http://users.rcn.com/carlott/projects.htm
>>
>> Looking for feedback.
>>
>>Regards,
>> Henry Carl Ott N2RVQ
>>
>>
>>
>>---
>>You are currently subscribed to picsig as: mark@cpovo.net
>>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>>
>>
>>
>
>
>
>---
>You are currently subscribed to picsig as: zclobes@swbell.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>
>
>

17. [picsig] Re: atmega ui tnc

From: Dale Seaburg <kg5lt@earthlink.net>
Date: Tue, 07 Jan 2003 19:06:00 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114040-2003.01.07-19.52.43--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi guys,

Perhaps we need an avrsig@lists.tapr.org ;-)

I too am toying with a ui tnc, based on either a 8515 or mega128 - I started out with an 8515, but it's run out of flash space for what I wanted to do. So, I've upsized to a mega128, mainly because I want to use the TWI (two wire interface aka i2c) to a FM24C256 FRAM - 32kb RAM, but don't want to take the extra flash to bitbang the i2c in an 8515.

I wanted to take, say Mike Berg's receive-only, or digi design, and convert it to the avr series, but make it as interrupt driven as possible. Also, I want to do it in C, not assembler (as much as possible).

I have looked at Henry's 2313 design, and almost built it, but I kept thinking I really want to go bigger like at least an 8515.

However, I've set the project aside for a while, because I ran into a brick wall everytime I turned around. The MX614 appears to be a virtual random interrupt generator to say the least, even with the audio input (AC) shorted. For a while I was able to decode bits and pieces of traffic, but now, it's getting bogged down in continuous random interrupts from the MX614. Probably my poor s/w design. Plus, I've run out of my free time at the moment.

I like the idea of an open-source TNC, especially if it uses an avr chip.

Sounds like you guys are on a good track.

73 - Dale. KG5LT

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18. [picsig] Re: atmega ui tnc

From: John Hansen <hansen@fredonia.edu>
Date: Tue, 07 Jan 2003 20:32:34 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114045-2003.01.07-20.22.20--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>However, I've set the project aside for a while, because I ran into a
>brick wall everytime I turned around. The MX614 appears to be a virtual
>random interrupt generator to say the least, even with the audio input
>(AC) shorted.

Believe it or not, it's designed to work this way. I had a discussion with
an MX-COM engineer on this subject when I started using the chip some years
ago and he said it generated random ones and zeros when it was getting no
audio. You can use the energy detector pin to generate your interrupt (but
that means you can't run it open squelch because that pin will respond to
noise). Alternatively you can analyze the bitstream, but its tough to do
that and have it be interrupt driven.

John Hansen, W2FS

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19. [picsig] Re: atmega ui tnc

From: Henry Carl Ott <carlott@interport.net>
Date: Tue, 07 Jan 2003 21:39:37 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114051-2003.01.07-21.25.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 08:32 PM 1/7/2003, you wrote:

>>However, I've set the project aside for a while, because I ran into a
>>brick wall everytime I turned around. The MX614 appears to be a virtual
>>random interrupt generator to say the least, even with the audio input
>>(AC) shorted.
>
>Believe it or not, it's designed to work this way. I had a discussion
>with an MX-COM engineer on this subject when I started using the chip some
>years ago and he said it generated random ones and zeros when it was
>getting no audio. You can use the energy detector pin to generate your
>interrupt (but that means you can't run it open squelch because that pin
>will respond to noise). Alternatively you can analyze the bitstream, but
>its tough to do that and have it be interrupt driven.
>
>John Hansen, W2FS
>

I'd thought of using the mx-614 on an int pin, but worried that on static
(or other noise) I'd get too many ints.
  The current mechanism of sampling the data pin at 8x (9600) works out
quite well, and there is not that much overhead, you also always seem to
need some sort of int driven system timer anyway and the rx timer
int takes care of that also.

  I use the CD pin to detect carrier, so I can't run open squelch. I mean
to do some tests to replace the function of the CD pin by oring my flag
detect bit flag, and the in-packet detect flag. A DPLL would probably be
better, which ties into my next thought......

   What I REALLY want to do is get rid of the MX-614 entirely. It works
okay, but can be hard to get and costs as much, if not more then the micro.

A good zero cross detector and the capture compare register should handle receive, and an r2r or better yet a pwm channel should handle xmit. The over head would be somewhat higher, but the advantages are there. It's a little beyond my programming skills just yet, but I'm going to start to work on it anyway.

And yes, I too would like to see an open source tnc. An atmega128 should have more then enough resources (I drool over that ram), and while I write all my code in assembler, I can see some advantages to coding in c for this type of project. The ui ax25 mode is trivial, but the connected mode seems nightmarish. I can see where you might want a higher level language for it.

-carl

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20. [picsig] MX614 etc...

From: "Mike Berg" <mikeberg@tds.net>
Date: Wed, 8 Jan 2003 06:24:27 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114085-2003.01.08-07.11.14--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Glad to see I've stirred up some activity...Good luck to all.

My question is I've noticed the MX614 energy detect pin seems to stay high most of the time - with a squelched input. It's the same on the two that I use for prototyping and testing here. I suppose it's possible
I've damaged them both, but I think unlikely. Tried pulling the RX filter high and changing the front end circuitry to no avail.
Any suggestions?

73 Mike
>Believe it or not, it's designed to work this way. I had a discussion with
>an MX-COM engineer on this subject when I started using the chip some
>years
>ago and he said it generated random ones and zeros when it was getting >no
>audio. You can use the energy detector pin to generate your interrupt (but
>that means you can't run it open squelch because that pin will respond to
>noise). Alternatively you can analyze the bitstream, but its tough to do
>that and have it be interrupt driven.

>John Hansen, W2FS

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21. [picsig] Re: MX614 etc...

From: John Hansen <hansen@fredonia.edu>
Date: Wed, 08 Jan 2003 11:37:11 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114132-2003.01.08-11.28.42--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You know it's weird. I've seen that behavior too. However, by the time I got around to looking at it in detail, I couldn't get the MX-614 I was using to get stuck. It may be because I'm now using the CML numbered parts instead of the MXCOM numbered parts. I may be imagining things, but I believe there are some small differences between them. For example, if you design a PIC program to look for randomly generated flags out of a CML part, they seem to be fewer and further between than they were with the MX-COM part. Granted, I haven't spent a lot of time analyzing this because I've never actually used the energy detect pin for anything, but I don't think your chip is bad, because I've seen the same thing on an intermittent basis.

John W2FS

At 06:24 AM 1/8/2003 -0600, you wrote:
>Glad to see I've stirred up some activity...Good luck to all.
>
>My question is I've noticed the MX614 energy detect pin seems to

>stay high most of the time - with a squelched input.

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22. [picsig] Re: MX614 etc...

From: Henry Carl Ott <carlott@interport.net>
Date: Wed, 08 Jan 2003 13:54:22 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114136-2003.01.08-13.40.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 06:24 AM 1/8/2003, you wrote:
>Glad to see I've stirred up some activity...Good luck to all.
>
>My question is I've noticed the MX614 energy detect pin seems to
>stay high most of the time - with a squelched input. It's the same on
>the two that I use for prototyping and testing here. I suppose it's
>possible
>I've damaged them both, but I think unlikely. Tried pulling the RX filter
>high and changing the front end circuitry to no avail.
>Any suggestions?

  Well on my designs (done few at this point) the cd line stays low on squelched audio. (speaker audio from r-7000, vx-1, saber, others)
  My parts are MX labeled. I do think there was a design change somewhere along the lines, but I'm not sure if it corresponds to the MX vs CML marking.

  Here are a couple of things to check.

  First the obvious, is there any low level audio leaking out of your squelched circuit? The MX-614 can be pretty sensitive.
  And second, less obvious.
  I do know the part has a particular power up sequence. I believe it wants to be in pwr down (ZP) mode for a specified time period first before you put it into RX mode.
   Also you usually want to select the RX mode that does not send back channel data. Normally would not cause problems, but you never know.

And FWIW, I usually have an LED wired to ground, as well as going to a micro pin. No idea if this extra loading would affect anything.

-carl   N2RVQ

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23. [picsig] receive AX25 routine in CCS C?

From: "Peter Bennett" <runtime@intelnet.net.gt>
Date: Wed, 8 Jan 2003 12:59:24 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114137-2003.01.08-13.44.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello list,

Does someone have a C receive routine (max 15 to 20 bits) that would like to share?

Thank you in advance
Peter Bennett

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

24. [picsig] Re: MX614 etc...

From: "Andreas Junge - N6NU" <n6nu@arrl.net>
Date: Wed, 8 Jan 2003 11:05:18 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>

Message-ID: <LYR6890-114139-2003.01.08-13.50.02--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Why not wire the incoming data to the interrupt pin.

  1) The start bit will cause INTF.
  2) In the INT handler disable INTF and start TMR1 to wait for 1.5 bits
  3) in the handler for the TMR1 interrupt
     read the data and restart the timer for the duration of 1 bit
  4) repeat until all bits are read.
  5) Re-enable interrupt to wait for the next startbit

All interrupt driven in the background. Put the received data into a
ringbuffer and read at your leasure :-)

If the data bogus, you only get an interrupt at the 1200 baud data rate
anyway (from TNMR1)

Andreas, N6NU

-----Original Message-----
From: bounce-picsig-30684@lists.tapr.org
[mailto:bounce-picsig-30684@lists.tapr.org]On Behalf Of John Hansen
Sent: Wednesday, January 08, 2003 8:37 AM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: MX614 etc...

You know it's weird. I've seen that behavior too. However, by the time I
got around to looking at it in detail, I couldn't get the MX-614 I was
using to get stuck. It may be because I'm now using the CML numbered parts
instead of the MXCOM numbered parts. I may be imagining things, but I
believe there are some small differences between them. For example, if you
design a PIC program to look for randomly generated flags out of a CML
part, they seem to be fewer and further between than they were with the
MX-COM part. Granted, I haven't spent a lot of time analyzing this because
I've never actually used the energy detect pin for anything, but I don't
think your chip is bad, because I've seen the same thing on an intermittent
basis.

John W2FS

At 06:24 AM 1/8/2003 -0600, you wrote:
>Glad to see I've stirred up some activity...Good luck to all.
>
>My question is I've noticed the MX614 energy detect pin seems to
>stay high most of the time - with a squelched input.

You are currently subscribed to picsig as: n6nu@arrl.net
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

25. [picsig] Re: receive AX25 routine in CCS C?

From: John Hansen <hansen@fredonia.edu>
Date: Wed, 08 Jan 2003 14:22:22 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114140-2003.01.08-14.11.25--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You might find the paper I did a few years ago for the DCC on how to
receive AX.25 with a PIC useful. All of the examples were written in
C. It can be found at ftp://ftp.tapr.org in the pub/wa0ptv
directory. The file is named DCC2.zip.

73, John W2FS

At 12:59 PM 1/8/03 -0600, Peter Bennett wrote:
>Hello list,
>
>Does someone have a C receive routine (max 15 to 20 bits) that would like to
>share?

>
>Thank you in advance
>Peter Bennett
>
>
>
>---
>You are currently subscribed to picsig as: hansen@fredonia.edu
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

26. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: David VanHorn <dvanhorn@cedar.net>
Date: Thu, 09 Jan 2003 12:42:40 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114269-2003.01.09-12.29.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:22 AM 12/20/2002 -0600, Zack Clobes wrote:
>From a balloon chaser's perspective - it would be great to have a single
>device that combined multiple TNCs/Comm Ports. In my car, I have a GPS, a
>TNC, and would like to have another serial output device (kind of a
>heads-up-display), as well as a second TNC to operate on a separate
>frequency (either 440MHz packet, or PSK on HF/VHF).

I designed and built one of those...
One AVR cpu, and eight MAX3100 UARTs.

If I was to do it again, I'd dump the max uarts, and use eight small AVRs. They're cheaper, and smarter,
 and have tons more buffer space.

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27. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: Jeff King <jeff@aerodata.net>
Date: Thu, 09 Jan 2003 12:12:19 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114272-2003.01.09-12.58.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hmmmm....

Good idea dave. 16F627's also fit the bill and you don't even need a xtal.

Quoting David VanHorn <dvanhorn@cedar.net>:

> At 07:22 AM 12/20/2002 -0600, Zack Clobes wrote:
> >From a balloon chaser's perspective - it would be great to have a
> single
> >device that combined multiple TNCs/Comm Ports. In my car, I have a
> GPS, a
> >TNC, and would like to have another serial output device (kind of a
> >heads-up-display), as well as a second TNC to operate on a separate
> >frequency (either 440MHz packet, or PSK on HF/VHF).
>
> I designed and built one of those...
> One AVR cpu, and eight MAX3100 UARTs.
>
> If I was to do it again, I'd dump the max uarts, and use eight small
> AVRs. They're cheaper, and smarter, and have tons more buffer space.
>
>
>
> ---
> You are currently subscribed to picsig as: jeff@aerodata.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

>

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

28. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: David VanHorn <dvanhorn@cedar.net>
Date: Thu, 09 Jan 2003 17:12:04 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114305-2003.01.09-16.59.16--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 12:12 PM 1/9/2003 -0600, Jeff King wrote:
>Hmmmm....
>
>Good idea dave. 16F627's also fit the bill and you don't even need a xtal.

For that matter, a Tiny-22. No rock, no pages...

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29. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Fri, 10 Jan 2003 16:25:45 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114390-2003.01.10-00.15.23--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

G'Day All

Just an update... There is some work being done on an embedded ethernet
enhanced TNC with two radio ports (1200 bps, but with the option of
higher speeds), two serial ports, an RS-485 port, and some extra IO for
things like LCD and buttons.

Later we are able to add more radio ports through a number of means.
This design is based on a Rabbit core module - which means that although
the CPU is surface mount, and has 512K flash and 512K RAM - the
interface board will contain no surface mount, and could be easally
upgraded...

If you are interested in assisting with this project please contact me
privately. What we really need is some good 'C' coders - particularly if
you have experience with the Rabbit processor.

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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30. [picsig] programmer S/W for XP

From: "Ron Breitwisch" <rlbreit@mchsi.com>
Date: Sat, 11 Jan 2003 22:45:10 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114680-2003.01.11-23.31.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Anyone know of software to program the PIC-E that works with Windows XP? I
know that the usual picprg06.exe does not work with NT (and therefore I
assume XP).

Thanks in advance,
KC0OX

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31. [picsig] RE: programmer S/W for XP

From: "Andrew Rich" <andrew.rich@bigpond.com>
Date: Sun, 12 Jan 2003 14:53:00 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114681-2003.01.11-23.39.38--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If you right click on the program and got "compatibility" you can trick XP into thinking it works like win 98 or 95

-----Original Message-----
From: bounce-picsig-28143@lists.tapr.org
[mailto:bounce-picsig-28143@lists.tapr.org]On Behalf Of Ron Breitwisch
Sent: Sunday, 12 January 2003 14:45
To: TAPR PIC Development Special Interest Group
Subject: [picsig] programmer S/W for XP

Anyone know of software to program the PIC-E that works with Windows XP? I know that the usual picprg06.exe does not work with NT (and therefore I assume XP).

Thanks in advance,
KC0OX

You are currently subscribed to picsig as: andrew.rich@bigpond.com
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

32. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: PSHAFFER07@aol.com
Date: Mon, 13 Jan 2003 02:53:02 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114862-2003.01.13-02.39.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello all, Happy New Year,

I am only a follower to the PIC list, thanks for all the notes!
Only one comment I can make now is that I was supplied a new mother board* and processor for my computer here at work, only to find that it has NO serial ports and NO parallel ports, only 5 USB, 2 fire wire and a lan 10/100 port. That makes my packet adapter an orphan! USB port connections Please?

*ref Abit SupermaX a7 do it ALL

Phil Shaffer F1HBO
28 rue des Magnolias
66000 Perpignan France

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

33. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: Jeff King <jeff@aerodata.net>
Date: Mon, 13 Jan 2003 07:54:22 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114876-2003.01.13-08.41.16--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Baycom makes a USB TNC.
http:\\www.baycom.org

102 Euro so not too expensive. Only has drivers for 98, ME, 2000 and Linux at
this point.

Quoting PSHAFFER07@aol.com:

> Hello all, Happy New Year,
>
> I am only a follower to the PIC list, thanks for all the notes!
> Only one comment I can make now is that I was supplied a new mother
> board* and processor for my computer here at work, only to find that it
> has NO serial ports and NO parallel ports, only 5 USB, 2 fire wire and
> a lan 10/100 port. That makes my packet adapter an orphan! USB port
> connections Please?
>
> *ref Abit SupermaX a7 do it ALL
>
> Phil Shaffer F1HBO
> 28 rue des Magnolias
> 66000 Perpignan France
>
>
> ---
> You are currently subscribed to picsig as: jeff@aerodata.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>
>

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34. [picsig] Ethernet to serial converters

From: David Beach <VE3STI@rac.ca>
Date: Mon, 13 Jan 2003 09:52:39 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114882-2003.01.13-09.39.05--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

It was either on this or another list where the same topic arose a few weeks
back. I clipped a bunch of the replies and saved them in a text file for
future reference - mainly a bunch of URLs. I apologize for the mish-mash (I
didn't edit for style or grammar - the reference to 'I' is not me but one of
several original authors!) but hopefully some will be useful. I have used
NONE of these myself so usual disclaimers apply.

David Beach
VE3STI

****

There was some discussion a while back about SERIAL <> USB conversion... I
found a company that makes a converter for it: Datamatrix. Granted you do
not gain the speed of USB, but at least you get the serial port release-in
case yours are already full. Their URL:

http://www.prolog2k.com/prodserv/riginterface.htm

They ALSO make a
replacement for the Icom CT-17 interface-which is how I found them.

Saelig also offers a product for less than $40.

Go to http://www.saelig.com/ftdi.htm to see it.

At $40 (USD) shipped, Dontronics has an interesting device:

http://www.dontronics.com/usb_232.html

Interestingly, you may also buy the components.
There are full data sheets, etc.

I have not used these, personally. I have the Keyspan

4-port serial USB unit for my Mac.

Another USB to Serial adapter is from Buxcomm

http://www.packetradio.com/rascalmkv.htm

 near the bottom of the page. It is not 6' (more like 1'),
does not have a DB9 - DB25 adapter, does have a CD with drivers and maybe a
few $ less.
Installed on Win98SE and Win2K and works. Haven't tried it with DOS - don't
know if
there are drivers.

****

> From: PSHAFFER07@aol.com
> Reply-To: "TAPR PIC Development Special Interest Group"
> <picsig@lists.tapr.org>
> Date: Mon, 13 Jan 2003 02:53:02 -0500
> To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
> Subject: [picsig] Re: Ethernet vs USB - Ethernet Wins?
>
>
> Hello all, Happy New Year,
>
> I am only a follower to the PIC list, thanks for all the notes!
> Only one comment I can make now is that I was supplied a new mother board* and
> processor for my computer here at work, only to find that it has NO serial
> ports and NO parallel ports, only 5 USB, 2 fire wire and a lan 10/100 port.
> That makes my packet adapter an orphan! USB port connections Please?
>
> *ref Abit SupermaX a7 do it ALL
>
> Phil Shaffer F1HBO
> 28 rue des Magnolias
> 66000 Perpignan France

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35. [picsig] Re: Ethernet vs USB - Ethernet Wins?

From: "BILL FROVIK" <n0mnb@email.msn.com>
Date: Mon, 13 Jan 2003 15:22:31 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114927-2003.01.13-16.09.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

i have a usb to 9 pin serial port .. do a search on interent for pfrank
connectors.. mine work great

73 n0mnb
----- Original Message -----
From: <PSHAFFER07@aol.com>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Monday, January 13, 2003 1:53 AM
Subject: [picsig] Re: Ethernet vs USB - Ethernet Wins?

>
> Hello all, Happy New Year,
>
> I am only a follower to the PIC list, thanks for all the notes!
> Only one comment I can make now is that I was supplied a new mother board*
and processor for my computer here at work, only to find that it has NO
serial ports and NO parallel ports, only 5 USB, 2 fire wire and a lan
10/100 port. That makes my packet adapter an orphan! USB port connections
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> *ref Abit SupermaX a7 do it ALL
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> Phil Shaffer F1HBO
> 28 rue des Magnolias
> 66000 Perpignan France
>
>
> ---
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>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.435 / Virus Database: 244 - Release Date: 12/30/2002

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36. [picsig] PIC16F876 Analog to Digital Converter - HELP!

From: "Lee De Vries" <LDEVRIES@gordontafe.edu.au>
Date: Tue, 14 Jan 2003 11:05:32 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114956-2003.01.13-18.52.15--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All,

I am working on a antenna coupling unit using a PIC16F876. I have the majority of the logic working and thought it would leave the A/D conversion of forward & reflected power till last. Ha... not so easy.

I have re-read the Data sheet over and over again. I am observing all the acquisition times, the justification, the fact that
ADRESL is in bank 1 whereas ADRESH is in bank 0 (why did Microchip do that I wonder?).

I have some test loop reading RA0 & RA1. and printing out these values connect to two pots between Vss & Vdd to generate 0- 5 volts for both inputs.

I have configured it in the 3/0 mode and have grounded RA3

The data is always between 0 - 1023, but is not consistant. It varies all over the place.
There seems to be some interaction between the two channels, when either of the pots are changed.

The device may be faulty, but it will be a few weeks before I can get hold of a few more chips to substitute to eliminate a faulty device.

Does any one have some code written in assembler which "works" for me to try.

Like Homer, I only have one hair left to pull out!

Lee de Vries VK3PK
[Attachment: winmail.dat; application/ms-tnef; 4,522 bytes]

37. [picsig] Re: PIC16F876 Analog to Digital Converter - HELP!

From: James Jefferson <jjeffers@aprsworld.net>
Date: Mon, 13 Jan 2003 20:03:25 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-114987-2003.01.13-20.50.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Look very carefully at the analog portion of your circuit. You may find it
nescessary to using an external voltage reference source to eliminate noise,
if you are not using one already. Be sure everything is bypassed and that
your analog and digital grounds are connected at only one point.

-Jim Kb0THN

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38. [picsig] Re: picsig digest: January 13, 2003

From: "J.P. Rouland" <jprouland@attbi.com>
Date: Tue, 14 Jan 2003 08:02:05 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-115062-2003.01.14-10.52.18--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Phil, salut!
USB to serial adapters do exist, as gadgets attached to a
USB port.

Never used them, no experience, but they exist.
J.P. Rouland NQ6T (born in Niort..)

TAPR PIC Development Special Interest Group digest wrote:
>
> TAPR PIC Development Special Interest Group Digest for Monday, January 13, 2003.
>
> 1. Re: Ethernet vs USB - Ethernet Wins?
> 2. Re: Ethernet vs USB - Ethernet Wins?
> 3. Ethernet to serial converters
> 4. Re: Ethernet vs USB - Ethernet Wins?
> 5. PIC16F876 Analog to Digital Converter - HELP!
> 6. Re: PIC16F876 Analog to Digital Converter - HELP!
>
> --
>
> Subject: Re: Ethernet vs USB - Ethernet Wins?
> From: PSHAFFER07@aol.com
> Date: Mon, 13 Jan 2003 02:53:02 -0500
> X-Message-Number: 1
>
> Hello all, Happy New Year,
>
> I am only a follower to the PIC list, thanks for all the notes!
> Only one comment I can make now is that I was supplied a new mother board* and processor for my
computer here at work, only to find that it has NO serial ports and NO parallel ports, only 5 USB, 2
fire wire and a lan 10/100 port. That makes my packet adapter an orphan! USB port connections Please?
>
> *ref Abit SupermaX a7 do it ALL
>
> Phil Shaffer F1HBO
> 28 rue des Magnolias
> 66000 Perpignan France
>
> --
>
> Subject: Re: Ethernet vs USB - Ethernet Wins?
> From: Jeff King <jeff@aerodata.net>
> Date: Mon, 13 Jan 2003 07:54:22 -0600 (CST)
> X-Message-Number: 2
>
> Baycom makes a USB TNC.
> http:\\www.baycom.org
>
> 102 Euro so not too expensive. Only has drivers for 98, ME, 2000 and Linux at
> this point.
>
> Quoting PSHAFFER07@aol.com:
>
> >
> > Hello all, Happy New Year,
> >
> > I am only a follower to the PIC list, thanks for all the notes!
> > Only one comment I can make now is that I was supplied a new mother
> > board* and processor for my computer here at work, only to find that it
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> >
> > Phil Shaffer F1HBO
> > 28 rue des Magnolias
> > 66000 Perpignan France
> >
> >
> > ---
> > You are currently subscribed to picsig as: jeff@aerodata.net
> > To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
> >
> >
>
> --
>
> Subject: Ethernet to serial converters
> From: David Beach <VE3STI@rac.ca>
> Date: Mon, 13 Jan 2003 09:52:39 -0500
> X-Message-Number: 3
>

> It was either on this or another list where the same topic arose a few week=
> s
> back. I clipped a bunch of the replies and saved them in a text file for
> future reference - mainly a bunch of URLs. I apologize for the mish-mash (I
> didn't edit for style or grammar - the reference to 'I' is not me but one o=
> f
> several original authors!) but hopefully some will be useful. I have used
> NONE of these myself so usual disclaimers apply.
>
> David Beach
> VE3STI
>
> **********
>
> There was some discussion a while back about SERIAL <> USB conversion... I
> found a company that makes a converter for it: Datamatrix. Granted you do
> not gain the speed of USB, but at least you get the serial port release-in
> case yours are already full. Their URL:
>
> http://www.prolog2k.com/prodserv/riginterface.htm
>
> They ALSO make a=20
> replacement for the Icom CT-17 interface-which is how I found them.
>
> Saelig also offers a product for less than $40.
>
> Go to http://www.saelig.com/ftdi.htm to see it.
>
> At $40 (USD) shipped, Dontronics has an interesting device:
>
> http://www.dontronics.com/usb_232.html
>
> Interestingly, you may also buy the components.
> There are full data sheets, etc.
>
> I have not used these, personally. I have the Keyspan
> 4-port serial USB unit for my Mac.
>
> Another USB to Serial adapter is from Buxcomm
>
> http://www.packetradio.com/rascalmkv.htm
>
> near the bottom of the page.=A0 It is not 6' (more like 1'),
> does not have a DB9 - DB25 adapter, does have a CD with drivers and maybe a
> few $ less.
> Installed on Win98SE and Win2K and works.=A0 Haven't tried it with DOS - don'=
> t
> know if=20
> there are drivers.
>
> **********
>
> > From: PSHAFFER07@aol.com
> > Reply-To: "TAPR PIC Development Special Interest Group"
> > <picsig@lists.tapr.org>
> > Date: Mon, 13 Jan 2003 02:53:02 -0500
> > To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
> > Subject: [picsig] Re: Ethernet vs USB - Ethernet Wins?
> >=20
> >=20
> > Hello all, Happy New Year,
> >=20
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> * and
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> > ports and NO parallel ports, only 5 USB, 2 fire wire and a lan 10/100 po=
> rt.
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> >=20
> > *ref Abit SupermaX a7 do it ALL
> >=20
> > Phil Shaffer F1HBO
> > 28 rue des Magnolias
> > 66000 Perpignan France
>
> --
>

> Subject: Re: Ethernet vs USB - Ethernet Wins?
> From: "BILL FROVIK" <n0mnb@email.msn.com>
> Date: Mon, 13 Jan 2003 15:22:31 -0600
> X-Message-Number: 4
>
> i have a usb to 9 pin serial port .. do a search on interent for pfrank
> connectors.. mine work great
>
> 73 n0mnb
> ----- Original Message -----
> From: <PSHAFFER07@aol.com>
> To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
> Sent: Monday, January 13, 2003 1:53 AM
> Subject: [picsig] Re: Ethernet vs USB - Ethernet Wins?
>
> >
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> >
> > ---
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> >
> >
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.435 / Virus Database: 244 - Release Date: 12/30/2002
>
> --
>
> Subject: PIC16F876 Analog to Digital Converter - HELP!
> From: "Lee De Vries" <LDEVRIES@gordontafe.edu.au>
> Date: Tue, 14 Jan 2003 11:05:32 +1100
> X-Message-Number: 5
>
> This is a multi-part message in MIME format.
>
> ------_=_NextPart_001_01C2BB60.A7E57A83
> Content-Type: text/plain;
>   charset="utf-8"
> Content-Transfer-Encoding: base64
>
> SGkgQWxsLA0KIA0KSSBhbSB3b3JraW5nIG9uIGEgYW50ZW5uYSBjb3VwbGluZyB1bml0IHVzaW5n
> IGEgUElDMTZGODc2LiAgSSBoYXZlIHRoZSBtYWpvcml0eSBvZiB0aGUgbG9naWMgd29ya2luZyBh
> bmQgdGhvdWdodCBpdCB3b3VsZCBsZWF2ZSB0aGUgQS9EIGNvbnZlcnNpb24gb2YgZm9yd2FyZCAm
> IHJlZmxlY3RlZCBwb3dlciB0aWxsIGxhc3QuICAgSGEuLi4gIG5vdCBzbyBlYXN5Lg0KIA0KSSBo
> YXZlIHJlLXJlYWQgdGhlIERhdGEgc2hlZXQgb3ZlciBhbmQgb3ZlciBhZ2Fpbi4gIEkgYW0gb2Jz
> ZXJ2aW5nIGFsbCB0aGUgYWNxdWlzaXRpb24gdGltZXMsIHRoZSBqdXN0aWZpY2F0aW9uLCB0aGUg
> ZmFjdCB0aGF0IA0KQURSRVNMIGlzIGluIGJhbmsgMSB3aGVyZWFzIEFEUkVTCBpcyBpbiBiYW5r
> IDAgKCB3aHkgZGlkIE1pY3JvY2hpcCBkbyB0aGF0IEkgd29uZGVyPykuDQogDQpJIGhhdmUgc29t
> ZSB0ZXN0IGxvb3AgIHJlYWRpbmcgUkEwICYgUkExLiBhbmQgcHJpbnRpbmcgb3V0IHRoZXNlIHZh
> bHVlcyBjb25uZWN0IHRvIHR3byBwb3RzIGJldHdlZW4gVnNzICYgVmRkIHRvIGdlbmVyYXRlIDAt
> IDUgdm9sdHMgZm9yIGJvdGggaW5wdXRzLg0KIA0KSSBoYXZlIGNvbmZpZ3VyZWQgaXQgaW4gdGhl
> IDMvMCBtb2RlIGFuZCBoYXZlIGdyb3VuZGVkIFJBMyANCiANClRoZSBkYXRhIGlzIGFsd2F5cyBi
> ZXR3ZWVuIDAgLSAxMDIzLCBidXQgaXMgbm90IGNvbnNpc3RhbnQuICBJdCB2YXJpZXMgYWxsIG92
> ZXIgdGhlIHBsYWNlLg0KVGhlcmUgc2VlbXMgdG8gYmUgc29tZSBpbnRlcmFjdGlvbiBiZXR3ZWVu
> IHRoZSB0d28gY2hhbm5lbHMsIHdoZW4gZWl0aGVyIG9mIHRoZSBwb3RzIGFyZSBjaGFuZ2VkLg0K
> IA0KVGhlIGRldmljZSBtYXkgYmUgZmF1bHR5LCBidXQgaXQgd2lsbCBiZSBhIGZldyB3ZWVrcyBi
> ZWZvcmUgSSBjYW4gZ2V0IGhvbGQgb2YgYSBmZXcgbW9yZSBjaGlwcyB0byByBzdWJzdGl0dXRlIHRv
> IGVsaW1pbmF0ZSBhIGZhdWx0eSBkZXZpY2UuDQogDQpEb2VzIGFueSBvbmUgaGF2ZSBzb21lIGNv
> ZGUgd3JpdHRlbiBpbiBhc3NlbWJsZXIgd2hpY2ggIndvcmtzIiBmb3IgbWUgdG8gdHJ5Lg0KIA0K
> TGlrZSBIb21lciwgSSBvbmx5IGhhdmUgb25lIGhhaXIgbGVmdCB0byBwdWxsIG91dCENCiANCkxl
> ZSBkZSBWcmllcyAgICAgVkszUEsNCiAgICAgICANCiANCg==
>

```
> ------_=_NextPart_001_01C2BB60.A7E57A83
> Content-Type: application/ms-tnef;
>         name="winmail.dat"
> Content-Transfer-Encoding: base64
>
> eJ8+IiEAAQaQCAAEAAAAAAABAAEAAQeQBgAIAAAA5AQAAAAAAADoAAENgAQAAgAAAAIAAgABBYAD
> AA4AAADTBwEADgALAAUAIAACABsBASCAAwAOAAAA0wcBAA4ACwAFACAAAgAbAQEJgAEAIQAAAEUz
> NUU0NkNGMjc5RUY1NDhBM0M4OEY2NDNCMTU4RTBCAFQHAQOQBgAMEQAAOAAAAB8AGgABAAAAEgAA
> AEkAUABNAC4ATgBvAHQAZQAAAAAAAwA2AAAAAAAfADcAAQAAAFwAAABQAEkAQwAxADYARgA4ADcA
> NgAgAEEAbgBhAGwAbwBnACAAdABvACAARABpAGcAaQB0AGEAbAAgAEMAbwBuAHYAZQByAHQAZQBy
> ACAALQAgAEgARQBMAFAAIQAAAEAAOQCDeuWnYLvCAR8APQABAAAAAgAAAAAAAAACAUcAAQAAADMA
> AABjPUFVO2E9IDtwPUdPUkRPTk9SRztsPUZFTk1BSUwyLTAzMDExNDAwMDUzMlotNDUyNAAAHwBJ
> AAEAAABOAAAAWwBwAGkAYwBzAGkAZwBdACAARQB0AGgAZQByAG4AZQB0ACAAdABvACAAcwBlAHIA
> aQBhAGwAIABjAG8AbgB2AGUAcgB0AGUAcgBzAAAAAABAAE4AgBXHahO7wgEfAFoAAQAAABgAAABE
> AGEAdgBpAGQAIABCAGUAYQBjAGgAAAACAVsAAQAAADcAAAAAAAAAgSsfpL6jEBmdbgDdAQ9UAgAA
> AABEYXZpZCBCZWFjaABTTVRQAFZFM1NUSUByYWMuY2EAAAIBXAABAAAAEwAAAFNNVFA6VkUzU1RJ
> QFJBQy5DQQAAHwBdAAEAAAAYAAAARABhAHYAaQBkACAAQgBlAGEAYwBoAAAAAgFeAAEAAAA3AAAA
> AAAAAIErH6S+oxAZnW4A3QEPVAIAAAAARGF2aWQgQmVhY2gAU01UUABWRTNTVElAcmFjLmNhAAAC
> AV8AAQAAABMAAABTTVRQOlZFM1NUSUBSQUMuQ0EAAB8AZgABAAAACgAAAFMATQBUAFAAAAAAAB8A
> ZwABAAAAHAAAAFYARQAzAFMAVABJAEAAcgBhAGMALgBjAGEAAAAfAGgAAQAAAAoAAABTAE0AVABQ
> AAAAAAAfAGkAAQAAABwAAABWAEUAMwBTAFQASQBAAHIAYQBjAC4AYwBhAAAAHwBwAAEAAABOAAAA
> WwBwAGkAYwBzAGkAZwBdACAARQB0AGgAZQByAG4AZQB0ACAAdABvACAAcwBlAHIAaQBhAGwAIABj
> AG8AbgB2AGUAcgB0AGUAcgBzAAAAAAACAXEAAQAAABsAAAABwrsTmTgE+PRGD1pOUZjtlCbvLKsx
> ABLFYAoAHwB0AAEAAABYAAAAVABBAFAAUgAgAFAASQBDACAARABlAHYAZQBsAG8AcABtAGUAbgB0
> ACAAUwBwAGUAYwBpAGEAbAAgAEkAbgB0AGUAcgBlAHMAdAAgAEcAcgBvAHUAcAAAAB8AGgwBAAAA
> GgAAAEwAZQBlACAARABlACAAVgByAGkAZQBzAAAAAAAfAB0OAQAAAFwAAABQAEkAQwAxADYARgA4
> ADcANgAgAEEAbgBhAGwAbwBnACAAdABvACAARABpAGcAaQB0AGEAbAAgAEMAbwBuAHYAZQByAHQA
> ZQByACAALQAgAEgARQBMAFAAIQAAAAIBCRABAAAAdAgAAHAIAABEIAAATFpGdSTowccDAAoAcmNw
> ZzEyNYIyA0NodG1sMQMwPwEDAfcKgAKkA+MCAGNowQrAc2V0MCAHEwKA/xADAFAEVghVB7IR1Q5R
> AwHdENcyBgAGwxHVMwRGENlvEusR4wjvCfc7GM8OMDU7EdIMYGMAUAsJAWQzNpMRYAulNCAQAipc
> DrIDAZAOEDkgPEhUTXxMPhHjHecU8AqjHwwz4x2AHqBFQUQe/Q7xIB8FDhA2DvA8TUVUQQUHsEEk
> QD0iR0VOgEVSQVRPUiIS0WsCMAnwdCTQTQ3gA2BzEm8BgCBEHrIgRWQ0aXQLgGclkwNgbCInIb8i
> zx5RNzcekFRJaFRMRR7+NA7wKE04+jUekC8qzyj/HgUsES1gFyF/H88eFDURYDxCT0hEWSAnQHI9
> HjBynzCgHfMAIQMwM7FkbwDg8zOxCrFccRiwM7EQ8AMwHzQVEWAdqxzxMc9nOTbxHpBESVYz6QAA
> Ni83P884TzlfOmIdyTY0PU86bwgxNDgekEZPTlTCIACQemU9Mj07C+KJNglIaRFwbGwsHaz6NTzR
> L0HSM+kz9z57AcBfM/cKokbYCoAdrDAhQS//PQxG2TqvO788zz3fPu8//39BD0IfQy8dnUWfS88d
> 2DjBHYAmbmJzcAKANAj8J2EBQFAPSA9JH0ovSz//WL9NX05vUZ9Qj2PvUq9TvwNUz2a1SSBhbSB3
> fQWwaydyAiBqwGrAJcJu22uwBaB1C1AncnUDAAVAPnUAkCeBa7AvTGH1UEmCQyPwRjg3Ni5ZHw9a
> L1s6aqERAHZlIHS2aHLgAMBqBbAnUHlrcHc0cHMCGGBnDeBq9wBwZGty8QhgZw6wIG0BawB1Tmx1
> QG2/YiJsZXLGQdtfcGxBbnLQESBpa4Fz0dkCEHJ3CxFZDyZq0HDqViZx6RjQZnfAYyXQZMd6D3C/
> Wzpwb3cTMSdgx0SAdm93dGFzdG+ffk+PWyuCf4OPcctIYS6IYGeFX4ZvcctubwVAJoAg+XfQc3mI
> jFcfRp9cH10v/14/X09gX2FvYn9jj46vZa//k89nz2jfVX+Mj42fnW+JP/+KT47/kA+RH5Ivn6+U
> T5Vf/5Zvl3+Yj5mfmq+bv5zPcpU1GNAtGNBhdUJy4ERh/wGQsBBzEBFAa3B40XUTtCT+ZwtxiI+h
> r3G+atGA36my9m+2gASQdm1TgKFzAgDQfHF1BAAnUWuBJ2AHgSxvcvK1b7Z/ospqbTAnYGb/DeCz
> gHkRvCN5cADQBUBzAL+zgLifqa8OECPwMwFSM+uPC4C8Ya4YMIBSRVMnEJcEAHXQA6BiAHBrIA7w
> 3ndzELLhBCDFc0jF2hFg/ijGoXOwJ0B1QCYzEPAFIP8zYIvQwN9ud2qwawB1MASQ/D8pjD+e345f
> o9+k76X//6cPri+pL6o/rW+sX9bP0+//vU+ij88f0C/RP9JP01/Ub//Vf9aP3J/Yr7HNJoAHgHLw
> 5weQBUAYYG9w2j/bT3HLf7LiJ3IlMNofev9x6SUwMboudRNwBRACMGtDdcCy7weQcuDKP+NCdgdA
> ClAEIL94ocSQwKLJwWsAgBF0BCDOYhFAgEAJ8CBWBBHtT7PuX3IHVmR1QYvQZwnwRwSQs4By4DAt
> IC1Adv8G8PSBeYHGMIuQNfDxv+NC5QuAcPEgcy7dH94v3z//4E/hX+Jv43/kj+Wf5q8Av//qH+sv
> 3N/8//4P/x8ALwE//wJPA18EbwV/539y0Xihv6A+ZxdAGOB10sYRcwIzL/kPMG1vHHB1E3KzGlDx
> EPfLwXVAJTAzCi8LPwxPDV//Dm8PfxCPEZ8SrxO/HZ8Hz/8I3wnvGd8a7xv/HQ8eHx8vryA/IU8i
> XyNsVHMRZLOC98ehupB5sHn0mCwg+TAqUPQyM7wgYvEhx6GLghXR/21A6SBr0bVfJU9xvXXA8wD/
> c4DzQfpvLVK6krQjcwJsgP27EGX8HygvKT8qTytfLG//LX8ujy+fMK8xu3ywsBD08P5t9JDz8fSw
> Ng83HyZq6LP/8KH4wX0AeRL0tnMC9CLJYPtr0MSQbLwRxrFrkDmfQkL+ZW0AxsFzxvRjQkAVsU1R
> /fiQZDwPPR8+Lz8/QE9BX/9Cb0N/RI9Fn1X/SM9J3ybf/1I/U09UX1VvVn9Xj1ifWa/3Wr9Gb8mg
> ZbpAO+BzMciw//SwwHF2MHOgNIV18YCSa6GxMsBmZXd2APTwa/SS//nRcuAVYL/Ax+D4kHXAdXD/
> dk+5hu8QbUQXYFDDyYBH4+xzdV3A8MB08SBM4YvR/cRwbcSA+OJtQWvjauVRb/9gj2GfYq9jv2TP
> Zd9m72f//2kPeS9dH14vXz91b3Z/d49/eJ95r3q/e898333vfvxE/m/zQbRwyLC7oEzg6GgV0PUX
> gXfwkHT48MfgxhHHAPHxgG1ibLTRTeC/sPpA6iL0MHJt0CL5w+jSSBDjb2+I4nRyeXSfg7+Ez/+F
> 34bvh/+JD4ofiy+MP5iP/4BPgV+Cb5TPld+W75f/mQ8fmh+bL5w/nU+eXExpa3VM4EjowXK8ILhQ
> u6Bst8iwsmOOdGm04JCwZvPT9/vQOvLxICGiH6MvpD+lT/+mX6dvqH+pj6qfq6+0/5+//6DPod+x
> P7JPs1+0b7V/to//t5+4r7m/rHz08Grh+BA5Qv+7n7yvvbrKb8t/zI/Nn86vD8+/0M/R3/fySzNQ
> S/++f7+PwJ/Br8K/w8/E38Xv/8b/yA/a39OP1J/hP+JP41//5G/lf+aP55/or+m/6s/r3//s7+3/
> 7w/wH/Ev3t/W39fv/9j/2g/yb9wv3T/gb99f/Z//8r/zz/Tf9e/2//gP+R8AP58Gjwef+p/7rzpA
> NTgJwbBCT0RZ/UALizIMb4UO8jcJwUhUTUz9QAJ9ETAfADUQAQAAAIgAAAA8ADkANgA2ADQAOQA3
> AEMANgAzAEEARQA2AEUARgA0ADMAOQA4AEQAMQAyADQAOABFAEQANgAzADEANQAwADYANAAxAEEA
> NgBGADgARgBAAEYARQBOAE0AQQBJAEwAMgAuAGcAbwByAGQAbwBuAHQAYQBmAGUALgBlAGQAdQAu
> AGEAdQA+AAAAHwBHEAEAAAAeAAAAbQBlAHMAcwBhAGcAZQAvAHIAZgBjADgAMgAyAAAAAAALAPIQ
> AQAAAB8A8xABAAAAZAAAAFAASQBDADEANgBGADgANwA2ACAAQQBuAGEAbABvAGcAIAB0AG8AIABE
> AGkAZwBpAHQAYQBsACAAQwBvAG4AdgBlAHIAdABlAHIAIAAtACAASABFAEwAUAAhAC4ARQBNAEwA
> AAALAPYQAAAAAEAABzAEuLiuXrvCAUAACDD/A++nYLvCAQMA3j/p/QAAAwDxPwkMAAAfAPg/AQAA
> ABoAAABMAGUAZQAgAEQAZQAgAFYAcgBpAGUAcwAAAAAAAgH5PwEAAABOAAAAAAAAAAnynQMjAQhAa
> tLkIACsv4YIBAAAAAAAAAC9PPUdPUkRPTk9SRy9PVT1GRU5TSVRFL0NOPVJFQ0lQSUVOVFMvQ049
> TERFVlJJRVMAAAAfAPo/AQAAACoAAABTAHkAcwB0AGUAbQAgAEEAZABtAGkAbgBpAHMAdAByAGEA
> dABvAHIAAAAAAAIB+z8BAAAAHgAAAAAAAADcp0DIwEIQGrS5CAArL+GCAQAAAAAAAAAuAAAAAwD9
> P+QEAAADABlAAAAAAAAMAGkAAAAAAAAwAdQAAAAAADAB5AAAAAAB8AMEABAAAAEgAAAEwARABFAFYA
> UgBJAEUAUwAAAAAAHwAxQAEAAAASAAAATABEAEUAVgBSAEkARQBTAAAAAAAfADJAAQAAABwAAABW
> AEUAMwBTAFQASQBAAHIAYQBjAC4AYwBhAAAAHwAzQAEAAAAcAAAAVgBFADMAUwBUAEkAQAByAGEA
```

> YwAuAGMAYQAAAB8AOEABAAAAEgAAAEwARABFAFYAUgBJAEUAUwAAAAAAHwA5QAEAAAAEAAAALgAA
> AAsAKQAAAAAACwAjAAAAAAADAAYQA/CSIwMABxBtAwAAAwAQEAAAAAADABEQAAAAAB4ACBABAAAA
> ZQAAAEhJQUxMLElBTVdPUktJTkdPTkFBTlRFTk5BQ09VUExJTkdVTklUVVNJTkdBUElDMTZGODc2
> SUhBVkVUSEVNQUpPUklUWU9GVEhFTE9HSUNXT1JLSU5HQU5EVEhPVUdIVElUV08AAAAAgF/AAEA
> AABEAAAAPDk2NjQ5N0M2M0FFNkVGNDM5OEQxMjQ4RUQ2MzE1MDY0MUE2RjhGQEZFTk1BSUwyLmdv
> cmRvbnRhZmUuZWR1LmF1PgAOSw==
>
> ------_=_NextPart_001_01C2BB60.A7E57A83--
>
> --
>
> Subject: Re: PIC16F876 Analog to Digital Converter - HELP!
> From: James Jefferson <jjeffers@aprsworld.net>
> Date: Mon, 13 Jan 2003 20:03:25 -0600
> X-Message-Number: 6
>
> Look very carefully at the analog portion of your circuit. You may find i=
> t=20
> nescessary to using an external voltage reference source to eliminate noi=
> se,=20
> if you are not using one already. Be sure everything is bypassed and that=
> =20
> your analog and digital grounds are connected at only one point.=20
>
> -Jim Kb0THN
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to picsig as: jprouland@attbi.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
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39. [picsig] AntiTracker - Reverse Tracker...

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Wed, 15 Jan 2003 15:33:06 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-115181-2003.01.14-23.29.52--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

People

I have completed the shareware version of my reverse tracker, and almost
completed the comercial version.

The AntiTracker is a device that receives packets and displays them as
waypoints on a GPS receiver, just like a D7 Handheld. It is designed for
public service events where you want people to be monitoring the event,
but not being tracked. The base model AntiTracker will upload packets to
any GPS that understands the GPWPL NMEA sentence - Which means that it
does not work with most base level eTREX units. It uses a couple of
16F628 PIC processors as well as an MX614 modem IC

The professional version also talks to a GARMIN GPS receiver in binary
format uploading the packets in that form. This version is not quite
finished, and has issues decoding back to back packets, as well as
uploading the correct symbol to the GPS receiver. It uses a 16F876 PIC
processor and an MX614 Modem IC.

More information on both units is available
http://www.radio-active.net.au/web/tracking/antitracker.html

Darryl

The AntiTracker Basic (Shareware version) uses the AX25 decoder written
by Mike Berg N0QBH.

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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40. [picsig] DPLL and DCD, how?

From: Adi Linden <adil@adis.on.ca>
Date: Wed, 15 Jan 2003 01:27:23 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-115207-2003.01.15-02.14.50--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

I am trying to understand the concept of a DPLL for decoding a 1200bd
datastream and doing DCD. I think I got the idea of how the DPLL works.
But I still haven't figured out how DCD is derived from it. Anyone have
any clues or suggestions?

Adi

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41. [picsig] RE: DPLL and DCD, how?

From: <BobDonnell@arkalmus.com>
Date: Wed, 15 Jan 2003 11:47:24 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: <adil@adis.on.ca>
Message-ID: <LYR6890-115348-2003.01.15-14.34.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Adi,

Basically, what I think you're looking at doing here is keeping track of
how "hard" the dpll has to work to track the data transitions coming
from the modem, to keep the clock locked. If you're only having to
change your timing window by a small amount (or not change it at all),
you don't consider the dpll unlocked from the data. If you have a
larger discontinuity, you do consider it unlocked. You may want to
implement a counter scheme to filter the acquire and loss
characteristics for purposes of making a DCD decision. A buddy did the
filtering side of this a number of years ago, using CMOS logic, with
up/down counters and comparators, based on the TAPR DCD State Machine
EPROM. By being able to decide the value change at which the dpll has
truly lost lock, you may be able to do this kind of filtering with a
single counter. Another condition to test for would be whether you've
had a data transition recently - if no, you're not locked to a data
source - either there's no audio, or a single tone, being presented to
the modem. Both these in the context of a 1200 baud modem.

Does this help?

73, Bob, KD7NM

>-----Original Message-----
>From: bounce-picsig-17770@lists.tapr.org
>[mailto:bounce-picsig-17770@lists.tapr.org]On Behalf Of Adi Linden
>Sent: Tuesday, January 14, 2003 11:27 PM
>To: TAPR PIC Development Special Interest Group
>Subject: [picsig] DPLL and DCD, how?
>
>
>Hi,
>
>I am trying to understand the concept of a DPLL for decoding a 1200bd
>datastream and doing DCD. I think I got the idea of how the
>DPLL works.
>But I still haven't figured out how DCD is derived from it.
>Anyone have
>any clues or suggestions?
>
>Adi
>

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42. [picsig] RE: DPLL and DCD, how?

From: James Jefferson <jjeffers@aprsworld.net>
Date: Wed, 15 Jan 2003 13:54:05 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-115351-2003.01.15-14.40.59--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

(I tried to send this this morning, but lyris was being rude to me. Here is
another shot at it)

DCD is found using a finite state machine. N7CL has an implementation as
a lookup table. I re-implemented in a PIC micro a few years ago.

Details can be found here:
http://jamesj.jarviscomputer.com/deskmedia/packet/pic/

Also see "The Art of Electronics" for a detailed discussion on PLL which
this state machine is one of.

-Jim KB0THN

> Hi,
>
> I am trying to understand the concept of a DPLL for decoding a 1200bd
> datastream and doing DCD. I think I got the idea of how the DPLL
> works. But I still haven't figured out how DCD is derived from it.
> Anyone have any clues or suggestions?
>
> Adi
>

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43. [picsig] RE: DPLL and DCD, how?

From: Adi Linden <adil@adis.on.ca>
Date: Wed, 15 Jan 2003 21:33:17 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-115439-2003.01.15-22.20.10--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Some great information there.

Thanks,
Adi

On Wed, 15 Jan 2003, James Jefferson wrote:

> (I tried to send this this morning, but lyris was being rude to me. Here is
> another shot at it)
>
> DCD is found using a finite state machine. N7CL has an implementation as
> a lookup table. I re-implemented in a PIC micro a few years ago.
>
> Details can be found here:
> http://jamesj.jarviscomputer.com/deskmedia/packet/pic/
>
> Also see "The Art of Electronics" for a detailed discussion on PLL which
> this state machine is one of.
>
> -Jim KB0THN

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44. [picsig] PSR deadline coming soon!

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Sun, 19 Jan 2003 19:54:53 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-116151-2003.01.19-19.48.50--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just a reminder: If you are interested in submitting an article for TAPR's
newsletter, Packet Status Register, the deadline is the 26th, so send me

your input ASAP.

73,

Stan, WA1LOU, PSR Editor

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

45. [picsig] New List - ham-80211@lists.tapr.org

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sun, 26 Jan 2003 23:17:33 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-117281-2003.01.26-07.06.52--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Given the increased interest in Amateur applications for 802.11b, we
have decided to add another mailing list for discussions specifically on
its implementation in the Ham Radio world.

The list is designed to be a meeting place for all 802.11b experimenters
- regardless of where in the world they are located, or what protocol
changes are being advocated.

If you wish to join this mailing list the best way is probably to visit
the following URL

        http://www.tapr.org/cgi-bin/lyris.pl?enter=ham-80211&text_mode=0

To post to this mailing list send an email to

        ham-80211@lists.tapr.org

Darryl
TAPR Board Member.

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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46. [picsig] TAPR List Sponsorship

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Thu, 30 Jan 2003 21:38:19 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-118024-2003.01.30-05.25.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

People

Most of you would be aware that TAPR hosts this and other mailing lists.

You may not be aware of some of the other things that TAPR does, such as

        Sponsoring the development of 'Enabling Technologies' such as
                * High speed AD interfaces
                * New PIC-Encoder
        Sponsoring new projects
        Producing kits
        Running the annual Digital Communications Conference
        Providing the TAPR.ORG WWW site with software archive
        Providing the PSR magazine free to members and non-members

All of these things cost money. One way you can support TAPR in what it
is doing is to become a member of the organisation. Membership only
costs
US$20 per year and provides support to all these activities. You can
find
More information on www.tapr.org

If you cannot afford the annual membership, we would be happy for you to

Contribute in other ways. If you cannot find a project to assist with
Please contact me and I will find one for you.

Darryl Smith, VK2TDS
TAPR Board Member

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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47. [picsig] Re: TAPR List Sponsorship

From: Bill Vodall <wa7nwp@105.wa7nwp.ampr.org>
Date: Thu, 30 Jan 2003 07:04:30 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-118048-2003.01.30-10.13.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 09:38 PM 1/30/03 +1100, Darryl Smith wrote:
>People
> Membership only
>costs
>US$20 per year and provides support to all these activities. You can
>find

Hi Darryl,

Any online payment scheme yet such as Paypal?   I have 3 years dues waiting..

Bill, WA7NWP

73,
Bill - WA7NWP
This message sent by Amateur Radio TCP/IP on the Pacific Northwests "Wetnet"
http://www.wetnet.net

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February 2003

Original source file: picsig.0302
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0302

1. [picsig] Magazine Roundup - Silicon Chip & Elektor

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Mon, 3 Feb 2003 19:25:23 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-118592-2003.02.03-03.15.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Silicon Chip - Febuary 2003
www.siliconchip.com.au

PicAxe - PIC 12F629 based Basic Interpreter

Review - WM232-UHF Wireless Modem

Portapal Public Address System

240V Mains Filter

Windows based Eprom Programmer

Elektor Electronics - December 2002
www.elektor-electronics.co.uk

USB Audio-Codec with SPDIF

Programmable Dialout Blocker

Compact Flash interface for microcontroller systems (After they copied the TAPR board earlier in the year)

Capacitence Meter

Real RS-232 for laptops

Electronica;;y isolated AC zero crossing detector

And about 50 other small circuits.

Darryl Smith, VK2TDS POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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2. [picsig] Re: TAPR List Sponsorship

From: Jeff King <jeff@aerodata.net>
Date: Mon, 3 Feb 2003 11:43:08 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-118642-2003.02.03-11.31.01--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Darryl:

It is trival to setup paypal linked to a business checking, it can deposit funds directly to your account. Not sure who TAPR's accountant is, but if TAPR is loosing money for the sake of a $0.37 stamp, I'd look into it. Spur of the moment sales are becoming more and more a way of life.

--
Jeff King, jeff@aerodata.net on 02/03/2003

On Thu, 30 Jan 2003 07:04:30 -0800, Bill Vodall wrote:
>At 09:38 PM 1/30/03 +1100, Darryl Smith wrote:
>>People

>> Membership only
>>costs
>>US$20 per year and provides support to all these activities. You can
>>find
>
>Hi Darryl,
>
>Any online payment scheme yet such as Paypal? I have 3 years dues
waiting..
>
>Bill, WA7NWP
>
>73,
>Bill - WA7NWP
>This message sent by Amateur Radio TCP/IP on the Pacific Northwests "Wetnet"
>http://www.wetnet.net
>
>
>---
>You are currently subscribed to picsig as: jeff@aerodata.net
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3. [picsig] Antitrak

From: Ron Graham <rongraham@magnet.com.au>
Date: Wed, 05 Feb 2003 18:39:56 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119004-2003.02.05-03.32.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Darryl,
             16F628's finally arrived. Having a problem programming them.
Initially used David Taits PP program with (sort of) his programmer. This
almost worked .. apparently getting through the programming function to
(where I think) the extra memory (over the 16F84) is a problem.
               Found an upgraded DOS version called FPPDOS, but I can't
get it to work. I think because I am not defining hardware correctly.
Commands I don't understand are hS:D = hardware   fDDDD:DDDD =
device   tDD:DD = timing
Only instructions I have are
Usage: FPP [-devgqsnumcrphft!] hexfile
d = dump, e = erase, v = verify   etc .. I understand.
The commands then continue on the ones I have listed above .. hardware etc.

Any ideas ???

If not, what do you use for programming? ? your s/ware, will it work with
my Tait style programmer ..
if so, can you send me a copy?

Thanks, regards, Ron.

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4. [picsig] Winter 2003 Packet Status Register Available

From: John Ackermann N8UR <jra@febo.com>
Date: Wed, 05 Feb 2003 11:56:10 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119064-2003.02.05-11.51.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Winter, 2003 issue of TAPR's journal, The Packet Status Register, is
available online at http://www.tapr.org/PSR.

Its contents include:

* New 802.11 E-List
* TAPR Project Policy
* OneTech ¹02 Technical Symposium

* Book Review: 802.11 Wireless Networks
* 3D Environments and Mars: A Follow-up from the 2002 DCC
* Extending Icom OPC-581 Extension Cables for Icom IC-706s
* Digital Radio Mondiale and Amateur Radio Implications
* 2003 in Connecticut

Enjoy!

73,
John

John Ackermann   N8UR   jra@febo.com   http://www.febo.com
President, TAPR   n8ur@tapr.org   http://www.tapr.org

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5. [picsig] Antitrak

From: Ron Graham <rongraham@magnet.com.au>
Date: Thu, 06 Feb 2003 07:20:57 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119208-2003.02.05-19.07.34--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Apologies to the Group .. message was intended for Darryl.

Hi Darryl,
              16F628's finally arrived. Having a problem programming them.
Initially used David Taits PP
 >snip

Ron.

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6. [picsig] cheap RS-232 line driver

From: James Jefferson <jjeffers@aprsworld.net>
Date: Fri, 7 Feb 2003 11:58:46 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119520-2003.02.07-12.46.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi group,

I'm looking for a cheap 1TX / 1RX RS-232 line driver. I'm aware of Maxim's
product line, but wonder if there are any other manufacturers I should look
at.

Along those thoughts, anybody know of a assembly service for doing small run
surface mount soldering? Although I can, I don't like soldering 0603 parts
and anything smaller than SO-8.... :-o

-Jim KB0THN

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7. [picsig] Re: cheap RS-232 line driver

From: "Jason Rausch" <ke4nyv@msn.com>
Date: Fri, 07 Feb 2003 13:03:24 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119523-2003.02.07-12.52.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/html

>I'm looking for a cheap 1TX / 1RX RS-232 line driver. I'm aware of Maxim's

>product line, but wonder if there are any other manufacturers I should look

>at.

For as well as the MAX-232's and MAX-203's work and price, why would you want anything else? I

personally like the 203 better since it doesn't require the external charging caps :o)

I think Fairchild makes a similar IC, but I am not aware of the part number or specs. My guess is it's not as good as the Maxim part.

73's

Jason KE4NYV

www.ke4nyv.com <http://www.ke4nyv.com>

>From: James Jefferson

>Reply-To: "TAPR PIC Development Special Interest Group"

>To: "TAPR PIC Development Special Interest Group"

>Subject: [picsig] cheap RS-232 line driver

>Date: Fri, 7 Feb 2003 11:58:46 -0600

>

>Hi group,

>

>I'm looking for a cheap 1TX / 1RX RS-232 line driver. I'm aware of Maxim's

>product line, but wonder if there are any other manufacturers I should look

>at.

>

>Along those thoughts, anybody know of a assembly service for doing small run

>surface mount soldering? Although I can, I don't like soldering 0603 parts

>and anything smaller than SO-8.... :-o

>

>-Jim KB0THN

>

>---

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8. [picsig] Re: cheap RS-232 line driver

From: James Jefferson <jjeffers@aprsworld.net>
Date: Fri, 7 Feb 2003 12:09:23 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119524-2003.02.07-12.57.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> <P>For as well as the MAX-232's and MAX-203's work and price, why would you
> want anything else? I personally like the 203 better since it doesn't
> require the external charging caps :o)</P> <P>I think Fairchild makes a
> similar IC, but I am not aware of the part number or specs. My guess
> is it's not as good as the Maxim part.</P> <P>73's</P>

I guess I should have specified that I need fairly small parts. DIP-8 or SO-8 would be the desireable size. A MAX-232 is too big for the application and it draws way too much power. And they are pretty expensive. The part + 4 0.1uF charge pump capacitors.

-Jim

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9. [picsig] Re: cheap RS-232 line driver

From: Jeff King <jeff@aerodata.net>
Date: Fri, 7 Feb 2003 13:35:04 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119525-2003.02.07-13.23.05--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

James:

National has a clone of the MAX232 that I have used in a number of products.

http://www.national.com/pf/DS/DS14C232.html

and at the 1K price is around 0.65ea

http://www.digikey.com/scripts/US/DKSUS.dll?Pname?Name=DS14C232CN%2DND

Now, if you want really cheap, how a few 0.03 transistors? The "RX line" goes into the base of a NPN transistor via a 10K resister. The emitter is grounded and the collector is pulled high via another 10K resistor. The collector is hooked to your micro. + voltage to the base turns it on, - voltage it is off. Your done.

Now, the TX is a bit harder, in particular if you need a negative voltage, but generally just a little negative tends to work. You can use a micro to generate a negative voltage using a cap and a diode, but you do need a PWM to do this.

OK, here we go. 4 resistors needed (one for base, the other three for a voltage divider).

Again, use a NPN transistor. Ground the emitter, base via a 10K to the micro UART pin. Use one resistors to pull the collector high (your +12volt unregulated?). another resistor from the collector to the TX pin. Another resistor from the -negative supply to the TX pin. So what your Micro is doing is basically shorting out the + supply, which allows the negative supply to slightly pull it down. Only way this works is if your pull-up is stronger then your pull down (to negative), so it is not symmetrical but has worked for me in the past.

Might be able to make it look nicer with a few more transistors but it works for me.

About $0.10 RS-232 circuit.

Sometimes you can even use the crystal oscillator to get the negative voltage. Just don't load it to much.

--
Jeff King, jeff@aerodata.net on 02/07/2003

On Fri, 7 Feb 2003 11:58:46 -0600, James Jefferson wrote:
>Hi group,
>
>I'm looking for a cheap 1TX / 1RX RS-232 line driver. I'm aware of Maxim's
>product line, but wonder if there are any other manufacturers I should look
>at.
>
>Along those thoughts, anybody know of a assembly service for doing small run
>surface mount soldering? Although I can, I don't like soldering 0603 parts
>and anything smaller than SO-8.... :-o
>
>-Jim KB0THN
>
>---
>You are currently subscribed to picsig as: jeff@aerodata.net
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---
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10. [picsig] Re: cheap RS-232 line driver

From: Jeff King <jeff@aerodata.net>
Date: Fri, 7 Feb 2003 13:41:22 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119527-2003.02.07-13.29.49--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Missed one.

On Fri, 7 Feb 2003 11:58:46 -0600, James Jefferson wrote:

>Along those thoughts, anybody know of a assembly service for doing small run
>surface mount soldering? Although I can, I don't like soldering 0603 parts
>and anything smaller than SO-8.... :-o

Hmmm..... my cut off is 0805 but your right, the industry is going to 0403's
and the cheapest.

I use a local place, Hughes in Livonia Michigan for small runs. Asia for the
big runs. Best thing I can say is get to know the people in town.... who is
making your boards? Ask them if they know any contract assembly houses.

What are you making if you don't mind me asking (off list is fine).

-Jeff

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11. [picsig] Re: cheap RS-232 line driver

From: James Jefferson <jjeffers@aprsworld.net>
Date: Fri, 7 Feb 2003 13:06:15 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119529-2003.02.07-13.53.58--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> I use a local place, Hughes in Livonia Michigan for small runs. Asia for
> the big runs. Best thing I can say is get to know the people in town....
> who is making your boards? Ask them if they know any contract assembly
> houses.

Hrmm ... I am using expresspcb.com's production service for doing 100 board
runs. They are nice quality boards and I haven't run into the problems I had
with boards not looking like gerber files in the past. Of course the boards
are a lot more expensive, but I have built that margin into the price
already. For the 1.9 by 2.5" board I am paying about $3.

> What are you making if you don't mind me asking (off list is fine).

I don't mind a free plug:
I make wind speed dataloggers for the small scale renewable energy industry.
Basically a stand alone box that records the wind speed at a fixed interval
and then can be downloaded and post-processed on a PC. The wind speed data
can then be integrated to the power curve of a wind generator and the amount
of electricity can be figured out. They are generally installed and run for a
few months to a year to evaluate the suitability of a wind generator site.

I had some free code space after that, so they are also very simple APRS
weather stations. They report wind speed, wind gust, temperature, and rain
rainfall counter. See K0NY-2 for an example of that:
http://db.aprsworld.net/datamart/switch.php?call=k0ny-2&table=weather&maps=yes

My original idea was to have it be a wind speed display for Skywarn spotters.
So it does that do. There are 2 7-segment LED displays that show the current

wind speed. Very handy for spotting. I haven't marketed it to that group yet, but the few people that are using them for Skywarn like them. It is much more professional to say that there are 28MPH sustained breeze and 42MPH gusts than to say that "it looks real [sic] windy out there." (A common report of our local skywarn net)

I'm just putting the finishing touches on a new revision of the product. If there is interest I will post some information on it to the list. In my slightly biased opinion, it is a good example of a small project that has turned into a somewhat commercially successful product.

-Jim

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12. [picsig] Re: cheap RS-232 line driver

From: David VanHorn <dvanhorn@cedar.net>
Date: Fri, 07 Feb 2003 14:24:47 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119531-2003.02.07-14.13.04--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If I may, Peripheron (who pays my salary) in Vancouver BC does small runs, and down to 0402 SMD, and fine pitch devices.
I can put you in touch with the right guys to get a quote.

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13. [picsig] Re: cheap RS-232 line driver

From: Jeff King <jeff@aerodata.net>
Date: Fri, 7 Feb 2003 15:02:12 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119534-2003.02.07-14.50.13--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, 7 Feb 2003 13:06:15 -0600, James Jefferson wrote:

>Hrmm ... I am using expresspcb.com's production service for doing 100 board
>runs. They are nice quality boards and I haven't run into the problems I had
>with boards not looking like gerber files in the past. Of course the boards
>are a lot more expensive, but I have built that margin into the price
>already. For the 1.9 by 2.5" board I am paying about $3.

Try this place:

http://www.4pcb.com/

with the numbers above, they came back at $1.89 for qty 100. Sometimes they discount below that. They have made boards for me in the past and they where very nice. That is min hole size 13 mil, 10 mil spacing, soldermask and silkscreen. Sometimes you need to play with the parameters to get the lowest price. Also does NOT include tooling, which is $149.

It is a buyer's market now at the board houses, so don't be afraid to ask for a lower price.

Also, talk to your assembly house first before you make the board. With a board that small, it would be easier to build it in a scored array. The idea is you try to fill a 18"x18" PCB panel with as many boards as will fit, and then instead of cutting them apart when they are done, your score lines between the boards in the PCB material. So what you get back is a bunch of boards in a panel that you can break off. The idea being is the assembly house builds them in a multiple up array, and then when they are done, you break them apart like potato chips.

Bad thing here with 100 boards, your tooling charges are going to be the biggest cost.

Regards,

Jeff

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14. [picsig] Re: picsig digest: February 07, 2003

From: "J.P. Rouland" <jprouland@attbi.com>
Date: Sat, 08 Feb 2003 00:33:22 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119605-2003.02.08-03.26.22--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

1)T.I., Signetics, Siliconics (now Vishay)....And a few
more. But Maxim's are good.
2) Valley Services Engineering, San Jose, CA. Will do small
runs. I used them professionnally.
But won't be cheap, for a one-time operation. If you plan to
kit and sell in the future, it makes more sense. They can
provide board fab, and appro parts for you.
For a VERY complex board (1200 parts, 8 layers, mixed
analog/digital), they were charging $2000/board (PCB and
parts included), for the first 15-16 boards, to drop to
1000-1100 for regular quantities (repetitive, planned,
orders of 25 each every 2-3 months). Reason: they appro the
parts in bulk, and may be ordering the PCB in larger
quantities (Beware of changes and revs!!!), and their
stencils for masks, solder, and silkscreen, as well as
parts positioning software, are re-useable from the first
run.
J.P.

TAPR PIC Development Special Interest Group digest wrote:
>
> TAPR PIC Development Special Interest Group Digest for Friday, February 07, 2003.
>
> 1. cheap RS-232 line driver
> 2. Re: cheap RS-232 line driver
> 3. Re: cheap RS-232 line driver
> 4. Re: cheap RS-232 line driver
> 5. Re: cheap RS-232 line driver
> 6. Re: cheap RS-232 line driver
> 7. Re: cheap RS-232 line driver
> 8. Re: cheap RS-232 line driver
>
> --
>
> Subject: cheap RS-232 line driver
> From: James Jefferson <jjeffers@aprsworld.net>
> Date: Fri, 7 Feb 2003 11:58:46 -0600
> X-Message-Number: 1
>
> Hi group,
>
> I'm looking for a cheap 1TX / 1RX RS-232 line driver. I'm aware of Maxim'=
> s=20
> product line, but wonder if there are any other manufacturers I should lo=
> ok=20
> at.
>
> Along those thoughts, anybody know of a assembly service for doing small =
> run=20
> surface mount soldering? Although I can, I don't like soldering 0603 part=
> s=20
> and anything smaller than SO-8.... :-o
>
> -Jim KB0THN
>
> --
>
> Subject: Re: cheap RS-232 line driver
> From: "Jason Rausch" <ke4nyv@msn.com>
> Date: Fri, 07 Feb 2003 13:03:24 -0500
> X-Message-Number: 2
>
> <html> <DIV>
> <P>>I'm looking for a cheap 1TX / 1RX RS-232 line driver. I'm aware of Maxim's </P>
> <DIV></DIV>

> <P>>product line, but wonder if there are any other manufacturers I should look </P>
> <DIV></DIV>
> <P>>at. </P>
> <P>For as well as the MAX-232's and MAX-203's work and price, why would you want anything else?
I personally like the 203 better since it doesn't require the external charging caps :o)</P>
> <P>I think Fairchild makes a similar IC, but I am not aware of the part number or specs. My
guess is it's not as good as the Maxim part.</P>
> <P>73's</P>
> <P>Jason KE4NYV</P>
> <P><A href="http://www.ke4nyv.com">www.ke4nyv.com</A></P>
> <P>

 </P></DIV>
> <DIV></DIV>
> <DIV></DIV>>From: James Jefferson <JJEFFERS@APRSWORLD.NET>
> <DIV></DIV>>Reply-To: "TAPR PIC Development Special Interest Group" <PICSIG@LISTS.TAPR.ORG>
> <DIV></DIV>>To: "TAPR PIC Development Special Interest Group" <PICSIG@LISTS.TAPR.ORG>
> <DIV></DIV>>Subject: [picsig] cheap RS-232 line driver
> <DIV></DIV>>Date: Fri, 7 Feb 2003 11:58:46 -0600
> <DIV></DIV>>
> <DIV></DIV>>Hi group,
> <DIV></DIV>>
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> <DIV></DIV>>product line, but wonder if there are any other manufacturers I should look
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> <DIV></DIV>>
> <DIV></DIV>>Along those thoughts, anybody know of a assembly service for doing small run
> <DIV></DIV>>surface mount soldering? Although I can, I don't like soldering 0603 parts
> <DIV></DIV>>and anything smaller than SO-8.... :-o
> <DIV></DIV>>
> <DIV></DIV>>-Jim KB0THN
> <DIV></DIV>>
> <DIV></DIV>>---
> <DIV></DIV>>You are currently subscribed to picsig as: KE4NYV@msn.com
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> <DIV></DIV> <br clear=all><hr>Protect your PC - Click
here for McAfee.com VirusScan Online </html>
>
> ---
>
> Subject: Re: cheap RS-232 line driver
> From: James Jefferson <jjeffers@aprsworld.net>
> Date: Fri, 7 Feb 2003 12:09:23 -0600
> X-Message-Number: 3
>
> > <P>For as well as the MAX-232's and MAX-203's work and price, why would=
> you
> > want anything else? I personally like the 203 better since it doe=
> sn't
> > require the external charging caps :o)</P> <P>I think Fairchild makes a
> > similar IC, but I am not aware of the part number or specs. My gu=
> ess
> > is it's not as good as the Maxim part.</P> <P>73's</P>
>
> I guess I should have specified that I need fairly small parts. DIP-8 or =
> SO-8=20
> would be the desireable size. A MAX-232 is too big for the application an=
> d it=20
> draws way too much power. And they are pretty expensive. The part + 4 0.1=
> uF=20
> charge pump capacitors.
>
> -Jim
>
> ---
>
> Subject: Re: cheap RS-232 line driver
> From: Jeff King <jeff@aerodata.net>
> Date: Fri, 7 Feb 2003 13:35:04 -0500
> X-Message-Number: 4
>
> James:
>
> National has a clone of the MAX232 that I have used in a number=
> of products.
>
> http://www.national.com/pf/DS/DS14C232.html
>
> and at the 1K price is around 0.65ea
>
> http://www.digikey.com/scripts/US/DKSUS.dll?Pname?Name=3DDS14C232CN=

> %2DND
>
> Now, if you want really cheap, how a few 0.03 transistors? The=
> "RX line" goes
> into the base of a NPN transistor via a 10K resister. The emitter=
> is grounded
> and the collector is pulled high via another 10K resistor. The=
> collector is
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> Your done.
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> but generally just a little negative tends to work. You can use a=
> micro to
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> OK, here we go. 4 resistors needed (one for base, the other three=
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> Might be able to make it look nicer with a few more transistors=
> but it works
> for me.
>
> About $0.10 RS-232 circuit.
>
> Sometimes you can even use the crystal oscillator to get the=
> negative
> voltage. Just don't load it to much.
>
> --
> Jeff King, jeff@aerodata.net on 02/07/2003
>
> On Fri, 7 Feb 2003 11:58:46 -0600, James Jefferson wrote:
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> >
> >-Jim KB0THN
> >
> >---
> >You are currently subscribed to picsig as: jeff@aerodata.net
> >To unsubscribe send a blank email to=
> leave-picsig-6890E@lists.tapr.org
>
> --
>
> Subject: Re: cheap RS-232 line driver
> From: Jeff King <jeff@aerodata.net>

> Date: Fri, 7 Feb 2003 13:41:22 -0500
> X-Message-Number: 5
>
> Missed one.
>
> On Fri, 7 Feb 2003 11:58:46 -0600, James Jefferson wrote:
>
> >Along those thoughts, anybody know of a assembly service for=
> doing small run
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>
> Subject: Re: cheap RS-232 line driver
> From: James Jefferson <jjeffers@aprsworld.net>
> Date: Fri, 7 Feb 2003 13:06:15 -0600
> X-Message-Number: 6
>
> > I use a local place, Hughes in Livonia Michigan for small runs. Asia fo=
> r
> > the big runs. Best thing I can say is get to know the people in town..=
> =2E.
> > who is making your boards? Ask them if they know any contract assembly
> > houses.
>
> Hrmm ... I am using expresspcb.com's production service for doing 100 boa=
> rd=20
> runs. They are nice quality boards and I haven't run into the problems I =
> had=20
> with boards not looking like gerber files in the past. Of course the boar=
> ds=20
> are a lot more expensive, but I have built that margin into the price=20
> already. For the 1.9 by 2.5" board I am paying about $3.
>
> > What are you making if you don't mind me asking (off list is fine).
>
> I don't mind a free plug:
> I make wind speed dataloggers for the small scale renewable energy indust=
> ry.=20
> Basically a stand alone box that records the wind speed at a fixed interv=
> al=20
> and then can be downloaded and post-processed on a PC. The wind speed dat=
> a=20
> can then be integrated to the power curve of a wind generator and the amo=
> unt=20
> of electricity can be figured out. They are generally installed and run f=
> or a=20
> few months to a year to evaluate the suitability of a wind generator site=
> =2E
>
> I had some free code space after that, so they are also very simple APRS=20
> weather stations. They report wind speed, wind gust, temperature, and rai=
> n=20
> rainfall counter. See K0NY-2 for an example of that:
> http://db.aprsworld.net/datamart/switch.php?call=3Dk0ny-2&table=3Dweather=
> &maps=3Dyes
>
> My original idea was to have it be a wind speed display for Skywarn spott=
> ers.=20
> So it does that do. There are 2 7-segment LED displays that show the curr=
> ent=20

> wind speed. Very handy for spotting. I haven't marketed it to that group =
> yet,=20
> but the few people that are using them for Skywarn like them. It is much =
> more=20
> professional to say that there are 28MPH sustained breeze and 42MPH gusts=
> =20
> than to say that "it looks real [sic] windy out there." (A common report =
> of=20
> our local skywarn net)
>
> I'm just putting the finishing touches on a new revision of the product. =
> If=20
> there is interest I will post some information on it to the list. In my=20
> slightly biased opinion, it is a good example of a small project that has=
> =20
> turned into a somewhat commercially successful product.
>
> -Jim
>
> --
>
> Subject: Re: cheap RS-232 line driver
> From: David VanHorn <dvanhorn@cedar.net>
> Date: Fri, 07 Feb 2003 14:24:47 -0500
> X-Message-Number: 7
>
> If I may, Peripheron (who pays my salary) in Vancouver BC does small runs, and down to 0402 SMD, and
fine pitch devices.
> I can put you in touch with the right guys to get a quote.
>
> --
>
> Subject: Re: cheap RS-232 line driver
> From: Jeff King <jeff@aerodata.net>
> Date: Fri, 7 Feb 2003 15:02:12 -0500
> X-Message-Number: 8
>
> On Fri, 7 Feb 2003 13:06:15 -0600, James Jefferson wrote:
>
> >Hrmm ... I am using expresspcb.com's production service for=
> doing 100 board
> >runs. They are nice quality boards and I haven't run into the=
> problems I had
> >with boards not looking like gerber files in the past. Of course=
> the boards
> >are a lot more expensive, but I have built that margin into the=
> price
> >already. For the 1.9 by 2.5" board I am paying about $3.
>
> Try this place:
>
> http://www.4pcb.com/
>
> with the numbers above, they came back at $1.89 for qty 100.=
> Sometimes they
> discount below that. They have made boards for me in the past and=
> they where
> very nice. That is min hole size 13 mil, 10 mil spacing,=
> soldermask and
> silkscreen. Sometimes you need to play with the parameters to get=
> the lowest
> price. Also does NOT include tooling, which is $149.
>
> It is a buyer's market now at the board houses, so don't be=
> afraid to ask for
> a lower price.
>
> Also, talk to your assembly house first before you make the=
> board. With a
> board that small, it would be easier to build it in a scored=
> array. The idea
> is you try to fill a 18"x18" PCB panel with as many boards as=
> will fit, and
> then instead of cutting them apart when they are done, your score=
> lines
> between the boards in the PCB material. So what you get back is a=
> bunch of
> boards in a panel that you can break off. The idea being is the=
> assembly

> house builds them in a multiple up array, and then when they are=
> done, you
> break them apart like potato chips.
>
> Bad thing here with 100 boards, your tooling charges are going to=
> be the
> biggest cost.
>
> Regards,
>
> Jeff
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to picsig as: jprouland@attbi.com
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---
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15. [picsig] Re: cheap RS-232 line driver

From: "Robert S. Rau" <robertrau@mac.com>
Date: Sat, 8 Feb 2003 8:38:50
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-119619-2003.02.08-09.26.36--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You may want to look at the Analog Devices ADM101E. One Tx and One Rx.

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16. [picsig] PIC-E Newbie Question - NO PTT

From: "Michael Ruzinsky" <n8ecg@arrl.net>
Date: Mon, 17 Feb 2003 9:9:35
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-120884-2003.02.17-09.57.45--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Being snowed for the last two days, I decided that this might be a good
time to finish my pic-e project I started sometime last year.

I am trying to develop a mic-e type device for emergency communications
only. I would like it to transmit at the tail end of my voice transmission
every so often.

My problem is that the pic-e can't seem to trigger the radio's PTT when I
have the microphone attached. Everything seems to work fine when the
microphone isn't attached to the pic-e.

Here is the setup that I am testing:

Radio: IC-207H
Pins 1 - 8V OUT
     2 - Freq. UP/DOWN
     3 - 8V control IN
     4 - PTT
     5 - Mic AF (-)
     6 - Mic AF (+)
     7 - Ground
     8 - Data IN

Pic-E
J3 Configuration
   9 to 7 (Ground)
  12 to 6 (MIC Audio)
  14 to 4 (MIC PTT)
  16 to 1 (Mic Power to power the pic-e)

J5 J6 J4
xxxxx   8
xxxxx   7
xxxxx   6
xxxxx   5

```
   xxxxx 4
xxxxx    3
xxxxx    2
xxxxx    1

JP3 is jumpered.

Just by trial and error I have discovered that if I remove the j5 j6
connection on pin 3 I can plug in the microphone and the pic-e can still
trigger the PTT, but I can't use the microphone to PTT or control the
frequency.

Any suggestions?

Michael Ruzinsky
N8ECG@arrl.net


---
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```

17. [picsig] Re: PIC-E Newbie Question - NO PTT

```
From: <isomk@airmail.net>
Date: Mon, 17 Feb 2003 12:24:38 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-120900-2003.02.17-13.12.58--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

michael,
I dont know the particulars on your radio, but I had to do the following
to get reliable PTT on my Kenwood TH22AT handheld.

I added a small external relay and use the PIC-E's PTT circuit to
drive the relay coil and the isolated contacts wired to the radio's PTT
circuit. I had to do this for a couple of reasons:
1. The PTT was not reliable and sometimes the PTT circuit would lock
   the radio in transmit mode. I discovered the problem only existed
   when I was using a rubber duckie antenna and the PIC-E was next to
   the handheld. I pretty sure that RF was getting into the PIC-E
   and causing the processor to lock up. By using a separate magmount
   antenna, the problem went away, but to be on the safe side, I still
   run the relay circuit.
2. Also, from troubleshooting purposes, I added a LED across the output
   my my Trimble headless OEM GPS unit so I can see if it is running
   correctly ( LED flashes 1 every second to show valid GPS string is
   being outputted).. that way I can tell if PIC-E or GPS is having
   problem. I also used 2 other unused contacts on the relay to drive
   a LED to show me that the PIC-E is actually driving the circuit.
3. By using a relay, it makes it easier to use the radio with the microphone
   and still have the PIC-E wired in.

Good luck.

Ken
KD5AIA



---
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```

18. [picsig] RE: PIC-E Newbie Question - NO PTT

```
From: <BobDonnell@arkalmus.com>
Date: Tue, 18 Feb 2003 21:47:21 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-121104-2003.02.19-00.35.45--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Mike,

You might want to contact Icom for verification on this with regard to your specific radio, but some of
the newer Icom radios are purported to have an "intelligent" startup process, whereby they check to see
if an Icom smart microphone is attached, and if so, some of the functions of the microphone become
serial data commands instead of hardwire functions that we're most familiar with.  If I recall correctly
 the Icom has a data connector.  You might want to connect the mike directly to the radio, then make
measurements on the PTT pin of the data connector, to see if it changes state when the PTT on the
```

microphone is activated. If so, you may be able to just connect the PIC-E directly to the data port and
 have the functionality you desire. If not, and my supposition about the smart microphone is correct,
the only other alternative (that doesn't involve applying this to a different radio) would be to wire up
 a dumb mike for use with the PIC-E, in the process, losing the control capabilities offered by the
smart mike.

Hope that leads you in a useful direction.

73, Bob, KD7NM

Robert Donnell, KD7NM
14507 Madison Way
Lynnwood, WA 98037
Ph: 425-741-0999
Mailto:kd7nm@pugetsound.net

>-----Original Message-----
>From: bounce-picsig-17770@lists.tapr.org
>[mailto:bounce-picsig-17770@lists.tapr.org]On Behalf Of
>Michael Ruzinsky
>Sent: Monday, February 17, 2003 12:00 AM
>To: TAPR PIC Development Special Interest Group
>Subject: [picsig] PIC-E Newbie Question - NO PTT
>
>
>Being snowed for the last two days, I decided that this might
>be a good
>time to finish my pic-e project I started sometime last year.
>
>I am trying to develop a mic-e type device for emergency
>communications
>only. I would like it to transmit at the tail end of my voice
>transmission
>every so often.
>
>My problem is that the pic-e can't seem to trigger the radio's
>PTT when I
>have the microphone attached. Everything seems to work fine when the
>microphone isn't attached to the pic-e.
>
>Here is the setup that I am testing:
>
>Radio: IC-207H
>Pins 1 - 8V OUT
>   2 - Freq. UP/DOWN
>   3 - 8V control IN
>   4 - PTT
>   5 - Mic AF (-)
>   6 - Mic AF (+)
>   7 - Ground
>   8 - Data IN
>
>Pic-E
>J3 Configuration
>   9 to 7 (Ground)
> 12 to 6 (MIC Audio)
> 14 to 4 (MIC PTT)
> 16 to 1 (Mic Power to power the pic-e)
>
>J5 J6 J4
>xxxxx   8
>xxxxx   7
>xxxxx   6
>xxxxx   5
>   xxxxx 4
>xxxxx   3
>xxxxx   2
>xxxxx   1
>
>JP3 is jumpered.
>
>Just by trial and error I have discovered that if I remove the j5 j6
>connection on pin 3 I can plug in the microphone and the pic-e
>can still
>trigger the PTT, but I can't use the microphone to PTT or control the

>frequency.
>
>Any suggestions?
>
>Michael Ruzinsky
>N8ECG@arrl.net
>
>
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19. [picsig] Looking for source for MT8880 chip

From: Dan Welch <dan@byonics.com>
Date: Sun, 23 Feb 2003 11:27:07 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-121732-2003.02.23-14.16.12--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Does anyone know of a source for the Mitel MT8880 DTMF Transciever chip
(or an equivalent transceiver)?

Thanks

Dan Welch - W6DFW

 - Dan   Email: dan@byonics.com

See the GST-1 Converter for Earthmate GPS units at:
 http://www.byonics.com/gst-1

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20. [picsig] Re: Looking for source for MT8880 chip

From: "Marcelo Puhl" <mark@cpovo.net>
Date: Sun, 23 Feb 2003 19:43:38 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-121745-2003.02.23-17.32.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Have you tried at:

http://www.findchips.com

Mark

On 23 Feb 2003 at 11:27, Dan Welch wrote:

> Does anyone know of a source for the Mitel MT8880 DTMF Transciever chip
> (or an equivalent transceiver)?
>
> Thanks
>
> Dan Welch - W6DFW
>
> - Dan   Email: dan@byonics.com
>
> See the GST-1 Converter for Earthmate GPS units at:
> http://www.byonics.com/gst-1
>
>
> ---
> You are currently subscribed to picsig as: mark@cpovo.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

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21. [picsig] Re: Looking for source for MT8880 chip

From: Dan Welch <dan@byonics.com>
Date: Sun, 23 Feb 2003 16:43:12 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-121767-2003.02.23-19.32.16--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Mark,
   Thanks,
 Yes I did check Find Chips. I got 3 hits there, one has a $100.00 minimum
and I haven't gotten a response from the other 2, probably because I'm only
looking for a few parts initially. This is the reason I ask the list
hoping someone has played with DTMF transceivers and knows where to buy
less than a lifetime supply.

-Dan

At 07:43 PM 2/23/03 -0300, you wrote:
>
>Have you tried at:
>
>http://www.findchips.com
>
>Mark
>
>On 23 Feb 2003 at 11:27, Dan Welch wrote:
>
>> Does anyone know of a source for the Mitel MT8880 DTMF Transciever chip
>> (or an equivalent transceiver)?
>>
>> Thanks
>>
>> Dan Welch - W6DFW
>>
>> - Dan   Email: dan@byonics.com
>>
>> See the GST-1 Converter for Earthmate GPS units at:
>> http://www.byonics.com/gst-1
>>
>>
>> ---
>> You are currently subscribed to picsig as: mark@cpovo.net
>> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>>
>
>
>
>---
>You are currently subscribed to picsig as: dan@byonics.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

 - Dan   Email: dan@byonics.com

See the GST-1 Converter for Earthmate GPS units at:
 http://www.byonics.com/gst-1

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22. [picsig] Re: picsig digest: February 23, 2003

From: "J.P. Rouland" <jprouland@attbi.com>
Date: Sun, 23 Feb 2003 22:22:44 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-121799-2003.02.24-01.16.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Try Future Electronics (Future Direct, their distributor
/on-line service).
I can't find my last catalog, but seem to remember they
carry Mitel parts.
Good luck,
J.P.

TAPR PIC Development Special Interest Group digest wrote:
>
> TAPR PIC Development Special Interest Group Digest for Sunday, February 23, 2003.
>
> 1. Looking for source for MT8880 chip
> 2. Re: Looking for source for MT8880 chip
> 3. Re: Looking for source for MT8880 chip
>
> --
>
> Subject: Looking for source for MT8880 chip
> From: Dan Welch <dan@byonics.com>
> Date: Sun, 23 Feb 2003 11:27:07 -0800
> X-Message-Number: 1
>
> Does anyone know of a source for the Mitel MT8880 DTMF Transciever chip
> (or an equivalent transceiver)?
>
> Thanks
>
> Dan Welch - W6DFW
>
> - Dan   Email: dan@byonics.com
>
> See the GST-1 Converter for Earthmate GPS units at:
> http://www.byonics.com/gst-1
>
> --
>
> Subject: Re: Looking for source for MT8880 chip
> From: "Marcelo Puhl" <mark@cpovo.net>
> Date: Sun, 23 Feb 2003 19:43:38 -0300
> X-Message-Number: 2
>
> Have you tried at:
>
> http://www.findchips.com
>
> Mark
>
> On 23 Feb 2003 at 11:27, Dan Welch wrote:
>
> > Does anyone know of a source for the Mitel MT8880 DTMF Transciever chip
> > (or an equivalent transceiver)?
> >
> > Thanks
> >
> > Dan Welch - W6DFW
> >
> > - Dan   Email: dan@byonics.com
> >
> > See the GST-1 Converter for Earthmate GPS units at:
> > http://www.byonics.com/gst-1
> >
> >
> > ---
> > You are currently subscribed to picsig as: mark@cpovo.net
> > To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
> >
>
> --
>
> Subject: Re: Looking for source for MT8880 chip
> From: Dan Welch <dan@byonics.com>
> Date: Sun, 23 Feb 2003 16:43:12 -0800
> X-Message-Number: 3
>
> Mark,
>   Thanks,
> Yes I did check Find Chips. I got 3 hits there, one has a $100.00 minimum
> and I haven't gotten a response from the other 2, probably because I'm only
> looking for a few parts initially. This is the reason I ask the list
> hoping someone has played with DTMF transceivers and knows where to buy
> less than a lifetime supply.
>
> -Dan
>
> At 07:43 PM 2/23/03 -0300, you wrote:
> >

> >Have you tried at:
> >
> >http://www.findchips.com
> >
> >Mark
> >
> >On 23 Feb 2003 at 11:27, Dan Welch wrote:
> >
> >> Does anyone know of a source for the Mitel MT8880 DTMF Transciever chip
> >> (or an equivalent transceiver)?
> >>
> >> Thanks
> >>
> >> Dan Welch - W6DFW
> >>
> >> - Dan   Email: dan@byonics.com
> >>
> >> See the GST-1 Converter for Earthmate GPS units at:
> >> http://www.byonics.com/gst-1
> >>
> >>
> >> ---
> >> You are currently subscribed to picsig as: mark@cpovo.net
> >> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
> >>
> >
> >
> >
> >---
> >You are currently subscribed to picsig as: dan@byonics.com
> >To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
> >
>
> - Dan   Email: dan@byonics.com
>
> See the GST-1 Converter for Earthmate GPS units at:
> http://www.byonics.com/gst-1
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to picsig as: jprouland@attbi.com
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

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23. [picsig] Re: Looking for source for MT8880 chip

From: "HSHK" <hshk@ix.netcom.com>
Date: Mon, 24 Feb 2003 07:55:16 -0500 (Eastern Standard Time)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-121816-2003.02.24-07.45.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have been using the HOLTEK HT-9170

These are available directly from Holtek.

-------Original Message-------

From: TAPR PIC Development Special Interest Group
Date: Sunday, February 23, 2003 17:43:53
To: TAPR PIC Development Special Interest Group
Subject: [picsig] Re: Looking for source for MT8880 chip

Have you tried at:

http://www.findchips.com

Mark

On 23 Feb 2003 at 11:27, Dan Welch wrote:

> Does anyone know of a source for the Mitel MT8880 DTMF Transciever chip

> (or an equivalent transceiver)?
>
> Thanks
>
> Dan Welch - W6DFW
>
> - Dan Email: dan@byonics.com
>
> See the GST-1 Converter for Earthmate GPS units at:
> http://www.byonics.com/gst-1
>
>
> ---
> You are currently subscribed to picsig as: mark@cpovo.net
> To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org
>

You are currently subscribed to picsig as: hshk@ix.netcom.com
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

.

24. [picsig] Re: Looking for source for MT8880 chip

From: Adi Linden <adil@adis.on.ca>
Date: Wed, 26 Feb 2003 16:26:44 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: TAPR PIC Development Special Interest Group <picsig@lists.tapr.org>
Message-ID: <LYR6890-122202-2003.02.26-17.16.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Does anyone know of a source for the Mitel MT8880 DTMF Transciever chip
> (or an equivalent transceiver)?

Give B.G.Micro a try, http://bgmicro.com. Here's a direct link to the
part http://bgm.bgmicro.com/prodinfo.asp?sid=06823495370370376616522069&prodid=ICS8870&page=1&cri=8870&s
type=3

Adi

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

25. [picsig] Re: Looking for source for MT8880 chip

From: Adi Linden <adil@adis.on.ca>
Date: Wed, 26 Feb 2003 16:36:36 -0600 (CST)
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-122203-2003.02.26-17.25.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> > Does anyone know of a source for the Mitel MT8880 DTMF Transciever chip
> > (or an equivalent transceiver)?
>
> Give B.G.Micro a try, http://bgmicro.com. Here's a direct link to the
> part http://bgm.bgmicro.com/prodinfo.asp?sid=06823495370370376616522069&prodid=ICS8870&page=1&cri=8870
&stype=3

Never mind, I am going blind. Sorry, misread the 8880 for 8870.

Adi

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

26. [picsig] Re: Looking for source for MT8880 chip

From: Gregg Martell <gmartell@dejazzd.com>
Date: Fri, 28 Feb 2003 21:12:43 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-122582-2003.02.28-20.56.33--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

BG Micro used to offer the 8870 and and another DTMF generator chip (I
haven't checked if they still sell them), so you could use a two chip

solution if you can't find a 8880 source.

Gregg

www.bgmicro.com

At 11:27 AM 2/23/03 -0800, Dan Welch wrote:
>Does anyone know of a source for the Mitel MT8880 DTMF Transciever chip
>(or an equivalent transceiver)?
>
>Thanks
>
>Dan Welch - W6DFW
>
> - Dan   Email: dan@byonics.com
>
>See the GST-1 Converter for Earthmate GPS units at:
> http://www.byonics.com/gst-1
>
>
>---
>You are currently subscribed to picsig as: gmartell@pobox.com
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

March 2003

Original source file: picsig.0303
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0303

1. [picsig] TAPR Monthly Update

From: John Ackermann N8UR <jra@febo.com>
Date: Sun, 02 Mar 2003 18:40:34 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-122836-2003.03.02-18.35.30--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

(Sent on behalf of Darryl, VK2TDS, TAPR Membership Director -- mailto:
vk2tds@tapr.org)

People

TAPR Membership

Running TAPR takes resources, and as a non-profit organisation we rely
on members for part of our funding. If you support the work that TAPR is
doing, we would welcome your membership of the organisation. You can
join by clicking on http://www.tapr.org/tapr/html/orgf.html . We have
also been listening to members requesting that we support electronic
commerce. TAPR are currently testing the use of PayPal in association
with the current ordering system on the Web. We will post a message on
the WWW site as soon as this is available.

Until then you can still join. Just fill out the electronic form as
normal, and state in the comments that you want to pay with PayPal when
it is available.

Digital Communications Conference

This years DCC will take place at the Hartford/Windsor Marriott Airport
Hotel in Windsor, Connecticut, on the weekend of September 19-21, 2003.
The hotel is 6 miles south of Bradley International Airport (BDL) and 13
miles north of ARRL Headquarters in Newington. Information will soon be
available on http://www.tapr.org/tapr/html/conff.html. Until then you
can find more information in the PSR at
ftp://ftp.tapr.org/psr/Winter_86_2003.pdf

We will soon be issueing a call for papers for this event. Have a think
about what you want to write about and start planning your paper now. If
you are unable to come up with a subject, it is often possible to find
friends with something to write about, but who don't have the time. You
can help your friend and the Ham community by writing the paper on their
behalf. There will be two popular discussion points at the conference -
Software Defined Radios and 802.11 networks.

DCC Conference Proceedings

We have also reduced the price of each of the proceedings of the DCC up
until 1997 to only US$6 each. This makes the a real bargain. We are also
making available sets of volume 1-10 and 11-16 available for US33 each
- but please bear in mind that we no longer have copies of a number of
the proceedings so we cannot guarenttee that the sets will be complete.

Electronic Distribution of Packet Status Register (PSR) Magazine

Listening to members we have found that many people are concerned about
missing out on the PSR now that it has gone electronic. We recognise
this as an issue, and we have come up with a solution to make things a
bit easier in this digital age. We have created two mailing lists to
assist you with keeping up to date with the quarterly magazine. They are

PSR-Announce
PSR-PDF

PSR-Announce is designed to advise the availability of the PDF file for
download. We recognise that many people are on slow internet connections
at home, or in fact have to pay for their bandwidth. So we have created
a mailing list just to tell you when the magazine comes out, and to let
you know how to get it. You can subscribe by visiting

http://www.tapr.org/cgi-bin/lyris.pl?enter=psr-announce&text_mode=0

PSR-PDF is designed for people who have a faster internet connection, or who know that they will never get to read it unless it is sent directly to them. Since PSR often contains graphics, the file can be over one mByte. You can subscribe by clicking http://www.tapr.org/cgi-bin/lyris.pl?enter=psr-pdf&text_mode=0

802.11 Mailing List

Whilst we are on the subject of mailing list, TAPR have started a mailing list for 802.11 'Wireless Internet' operations. It seems that every community has a mailing list dedicated to 802.11. So how is the TAPR one different? It is dedicated to 802.11 use in ham radio. The list contains active members of the entire range of technical ability - from the most basic understanding of how radio works, to the deep internals of this equipment. Such a broad range that everyone is sure to fit in. You can join by visting http://www.tapr.org/cgi-bin/lyris.pl?enter=ham-80211&text_mode=0

GNUradio receives HDTV

Matt Etus and the other people at the GNUradio project have announced that they have managed to decode the HDTV data stream on their PC's and have published the source code online. This is an amazing feat by Matt and the team. They are not quite to the stage of real time HDTV decoding on a PC, but are close.

Write for PSR!!!

PSR needs articles, and we would love to publish lots more in the PSR magazine. PSR is a great place to publish articles on everything from local operating practices to deep technical papers. And since the last issue TAPR is now rewarding those people who are helping others by writing articles for the magazine. Following the last issue, six people had their memberships extended by three months. This is just a small thank you from us at TAPR to those people who help us out. More details on PSR can be found on www.tapr.org

Conclusion

I hope you have found this document informative and useful. TAPR is always looking for new things to do and how to improve what it is already doing. If you have any ideas or concerns, please email me on darryl@radio-active.net.au

Darryl

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] Call for Powerpoint Files

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Mon, 24 Mar 2003 08:39:56 +1100
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-125575-2003.03.23-16.32.49--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

People

I am looking for powerpoint files to create an improved indexing of PowerPoint files on TAPR.ORG. I have found some presentations, but I know that there are a LOT more out there. I would like to get as many powerpoint files on TAPR.ORG as possible and indexed.

If you have any powerpoint files that you would like to contribute to the TAPR.ORG archive, please send me an email at VK2TDS@TAPR.ORG and I will let you know where you can send the file. The files that I need are anything to do with amateur radio digital communications. This would include

DCC Presentations (I have most of 2002 seperately)
APRS and GPS
Digital Voice
Emergency Digital Operations
Spread Spectrum and 802.11
etc

The only powerpoints I know of are listed below...

Thanks.... Darryl VK2TDS

ftp.tapr.org
./aprssig/dosstuff/APRSdos/pcsat-sum.ppt
./aprssig/dosstuff/APRSdos/science-jpg.ppt
./aprssig/dosstuff/APRSdos/science-serb.ppt
./aprssig/dosstuff/DOSmisc/RWFPPT.zip
./aprssig/presentations/96olympic.zip
./aprssig/presentations/APRSNE.ZIP
./aprssig/presentations/APRSPRES.exe
./aprssig/presentations/FireTrak.ZIP
./aprssig/presentations/HamfestHandout.doc
./aprssig/presentations/N4NEQPPT.ZIP
./aprssig/presentations/VK2TDS_Presentation.zip
./aprssig/presentations/aprs_intro.zip
./aprssig/presentations/aprsbrochure.zip
./aprssig/presentations/aprsdemo.ppt
./aprssig/presentations/aprstprs98.pdf
./aprssig/presentations/aprstprs98.zip
./aprssig/presentations/dcc2k_intro.ppt
./aprssig/presentations/dcc99.ppt
./aprssig/presentations/ham_com_2001.ppt
./aprssig/presentations/kd4rdb-aprs-messages.ppt
./aprssig/presentations/kd4rdb.pdf
./aprssig/presentations/kd4rdb.ppt
./aprssig/presentations/train.zip
./pub/tprs/hamcom97.ppt
./pub/tprs/hamcom98/aprs.hamcom98.ppt
./pub/tprs/hamcom98/wb5aoh.hamcom98.ppt
./pub/tprs/hamcom98/wd0etz.hamcom98.ppt
./ss/intro_ss.ppt

Darryl Smith, VK2TDS POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] Serial cable for PIC-E

From: "Neville A. Cross" <yn1ncv@arrl.net>
Date: Fri, 28 Mar 2003 13:27:24 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-126459-2003.03.28-14.07.01--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello,

I ordered via Internet a PIC-E. I built the kit as soon as I got it. Know
that I am ready for running the diagnostic I notice that I have no idea
what kind of serial cable do I have to use. I have one cable for external
modems, like those that you can purchase for use a TNC and I also have one
straight serial cable (where each pin go to the same pin on the other side).

As I am in Nicaragua, and as far as I know is the first PIC-E over here, I
have no elmer to ask about this.

Thanks very much for your help.

Neville A. Cross
YN1NCV
Managua, Nicaragua

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] Re: Serial cable for PIC-E

From: "Byon Garrabrant" <byon@byon.com>
Date: Sun, 30 Mar 2003 10:14:02 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-126847-2003.03.30-13.04.21--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 28 Mar 2003 at 13:27, Neville A. Cross wrote:

> Hello,
>
> I ordered via Internet a PIC-E. I built the kit as soon as I got it.
> Know that I am ready for running the diagnostic I notice that I have
> no idea what kind of serial cable do I have to use. I have one cable
> for external modems, like those that you can purchase for use a TNC
> and I also have one straight serial cable (where each pin go to the
> same pin on the other side).
>
> As I am in Nicaragua, and as far as I know is the first PIC-E over
> here, I have no elmer to ask about this.
>
> Thanks very much for your help.
>
> Neville A. Cross
> YN1NCV
> Managua, Nicaragua

The PIC-E P1/GPS serial connector is designed to plug directly into a GPS. If you want to connect to a computer for serial I/O, you will need a gender changer, and a null modem adapter. The Gender chagner is to make the PIC-E connect to the PC physically, and the null modem swaps pins 2 and 3, while running pin 5 straight though, to allow communications. You may also need a straight through serial cable if you cannot convieniently reach the serial connector on the PC.

Byon

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] RE: Serial cable for PIC-E

From: "Neville A. Cross" <yn1ncv@arrl.net>
Date: Mon, 31 Mar 2003 09:34:20 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-126934-2003.03.31-10.13.45--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks to all for the emails that I got.

I succeeded in Programing the PIC-E

Neville A. Cross
YN1NCV
Managua, Nicaragua.

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April 2003

Original source file: picsig.0304
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0304

1. [picsig] Newbie question Was Fw: Serial cable for PIC-E

From: " Hugo J. Müller " <hjmhs@yahoo.com.ar>
Date: Tue, 1 Apr 2003 13:10:55 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127068-2003.04.01-11.06.09--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,
 someone can explain to me what is exactly the PIC-E, and for what
applications?
If may be in spanish, twice good ;-)

Bye
----- Original Message -----
From: "Neville A. Cross" <yn1ncv@arrl.net>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Friday, March 28, 2003 4:27 PM
Subject: [picsig] Serial cable for PIC-E

Hello,

I ordered via Internet a PIC-E. I built the kit as soon as I got it. Know
that I am ready for running the diagnostic I notice that I have no idea
what kind of serial cable do I have to use. I have one cable for external
modems, like those that you can purchase for use a TNC and I also have one
straight serial cable (where each pin go to the same pin on the other side).

As I am in Nicaragua, and as far as I know is the first PIC-E over here, I
have no elmer to ask about this.

Thanks very much for your help.

Neville A. Cross
YN1NCV
Managua, Nicaragua

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

2. [picsig] publish or perish

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Tue, 01 Apr 2003 19:38:06 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127136-2003.04.01-19.35.41--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here is your chance to become rich and famous! Well, maybe not rich, but
certainly famous.

The editorial board of Packet Status Register (PSR, TAPR□s quarterly
newsletter) is now soliciting articles, news items, etc. for the next issue
of the newsletter. Topics related to digital Amateur Radio will be given
preference and the editorial board reserves the right to determine what is
suitable for publication.

E-mail your contributions to wa1lou@tapr.org ASAP because the deadline for
the next issue of the newsletter is April 24.

Don't forget, if you are a TAPR member, you will add three months to your
TAPR membership for every article that is published in PSR.

73,

Stan Horzepa, WA1LOU, PSR Editor

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

3. [picsig] Just Beginning

From: Karl Verren <kn6cw@antelecom.net>
Date: Fri, 04 Apr 2003 21:00:23 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127530-2003.04.04-23.50.47--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dear List Members,

I have just finished building the PIC-E and I need to find a programming guide or a simple program to act as a TNC for a GPS receiver in APRS service. I simply want to beacon the GPS's position every two minutes or so on 144.390. To compound matters a bit, I am also using a Windows XP operating system on the computers here. Is ther anyone with some straight foreward advice for a situation like this ? Thanks in advance for your help.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

4. [picsig] RE: picsig digest: April 04, 2003

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Sat, 5 Apr 2003 15:46:26 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127548-2003.04.05-00.37.09--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Karl

I am about 6 months ahead of you... So I can offer some suggestions...

1. Buy a copy of CCS C compiler... The cheapest version

2. Get a very short hair cut... It is better not to have hair to pull out :-)

3. Look at the questions asked on this sig in the last 6 months...

4. I use a separate DOS computer for programming PIC's... Don't know if that is better, but it gives exercise walking from the PC to the programmer.

5. Some errors in code are just problems choosing what fuses to blow

6. MCLR should usually be pulled to one of the rails...

7. Don't buy the PIC book by Pedeko.... Unless you need a stand for a computer monitor... The book teaches you more on 8086 programming in the first 100 pages.

Good Luck

Darryl Smith, VK2TDS POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

5. [picsig] Re: Just Beginning

From: Mark Cheavens <mcheavens@usa.net>
Date: Sat, 05 Apr 2003 08:32:51 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Cc: Karl Verren <kn6cw@antelecom.net>
Message-ID: <LYR6890-127587-2003.04.05-09.22.17--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Karl,
I'm not really sure what you are looking for. Are you looking for a TNC in
order to decode your data? OR are you looking for a dummy set of GPS data
to feed into the PIC-E for testing?

AGWPE will act as a TNC using your sound card.

http://www.cheavens.com/mark/radio/packetradio/gps69.zip

This is a data set from a GPS that has been looped around. It will show
your position on US59 on the southwest side of Houston, TX

To use it, connect your PIC-E with a null modem cable to your computer. Use
hyperterminal (or similar) and "send as text" the text file within the zip
above. Your valid LED should light right away.

Mark Cheavens
KC5EVE

>Subject: Just Beginning
>From: Karl Verren <kn6cw@antelecom.net>
>Date: Fri, 04 Apr 2003 21:00:23 -0800
>X-Message-Number: 1
>
>   Dear List Members,
>
>   I have just finished building the PIC-E and I need to find a
> programming
>guide or a simple program to act as a TNC for a GPS receiver in APRS
>service. I simply want to beacon the GPS's position every two minutes or so
>on 144.390. To compound matters a bit, I am also using a Windows XP
>operating system on the computers here. Is ther anyone with some straight
>foreward advice for a situation like this ? Thanks in advance for your
>help.
>
>
>
>
>---
>
>END OF DIGEST
>
>---
>You are currently subscribed to picsig as: mcheavens@usa.net
>To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

---
You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

6. [picsig] Re: Newbie question

From: Barry Gershenfeld <mailist@san.rr.com>
Date: Sat, 05 Apr 2003 18:51:02 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127632-2003.04.05-22.18.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Hi,
> someone can explain to me what is exactly the PIC-E, and for what
>applications?
>If may be in spanish, twice good ;-)

Well, my knowledge Spanish is probably a little less than that of the PIC-E,
but I looked at the manual to make sure I was mostly right.

This board has a serial port that can take data from a GPS receiver, and
a modem chip that can send packets right into the mic jack on your
transceiver. So you can transmit your location using packet radio.

But wait, there's more. The serial port is really a PIC microprocessor, and
the designers saw to it that it could be programmed to do whatever you
want. I checked the ftp site and it seems there is a lot of software people
have contributed.

I learned all this by reading the manual. Go to the tapr site, click on the
PIC-E link, and download the manual. It's all there, even the schematic.

73,

Barry

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

7. [picsig] Kam Decoding from Pic-E

From: "Tom Frawley" <tomski1@eircom.net>
Date: Sun, 6 Apr 2003 14:28:31
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127698-2003.04.06-15.18.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dear List Members,

I have just finished building my Pic-E. All checks okay and programmed the
Pic fine. Loaded the software GPS-E-2 and the unit transmitting into my rig
DR-140. But I cannot decode the packets across the shack. I hear the
packets going out fine on the monitor and the KAM lights up on the received
signal. I am using separate receiver,the Kam into UI-View and it works okay
with tinytrak. Is there some tweaking on the Pic-E board that I have
forgotten?
Thanks in anticipation.

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

8. [picsig] Firmware for PIC-E

From: "Byron D. Lichtenwalner" <w3wkr@ptd.net>
Date: Sun, 6 Apr 2003 17:03:06 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127703-2003.04.06-16.53.18--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello
It has been a while since I built my PIC-E. Today I tried to see what new
firmware was available. No luck on finding it on TAPR.org. Anybody know
where it is "hidden"?
Byron

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

9. [picsig] Re: Firmware for PIC-E

From: Barry Gershenfeld <mailist@san.rr.com>
Date: Sun, 06 Apr 2003 15:46:29 -0800
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127709-2003.04.06-18.37.06--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>It has been a while since I built my PIC-E. Today I tried to see what new
>firmware was available. No luck on finding it on TAPR.org. Anybody know
>where it is "hidden"?
>Byron

It's true that a lot of the links in the manual don't work. Someone ought
to fix
them. I did find files at:

ftp://ftp.tapr.org/picsig/software/.

I just realized I could look at the text files without downloading the
zips, and
these files seem to be what you seek.

Barry

You are currently subscribed to picsig as: lyris.picsig@tapr.org
To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

10. [picsig] Re: Newbie question (EN ESPANOL)

From: "Scott Johnson" <kd5mhm@kd5mhm.org>
Date: Sun, 6 Apr 2003 18:18:50 -0500
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127712-2003.04.06-19.08.56--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hola Hugo,
El Pic-E es una producto del organization TAPR, para usar el sistema APRS
(posicion reportada automatica por radio). El Pic-E provide todo lo
necesario para conectar un unidad de GPS al radio, y transmitir su posicion.
Uno pueda pensarlo como un modem para el radio. (Me faltan muchas palabras
en Espanol para describirlo bien, lo siento.)

Yo tengo dos que compre hace unos anos. Viene en partes y hay que
asemblarlo, probarlo y programarlo. Era muy facil, pero seria mejor conocer
un poco de lo electronico antes.

Lo mas deficil es conectarlo al radio, porque las conecciones son diferentes
para cada radio, pero y aun esto no es mucho...

Escribame directament y puedo esplicar mas...

Desculpeme mi lengua mala, pero a lo menos requerdo un poco todavia...

Y, una pregunta. porque hablas Espanol con un apellido Aleman?

Hasta entonces,
Scott
kd5mhm

----- Original Message -----
From: "Hugo J. Müller" <hjmhs@yahoo.com.ar>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Tuesday, April 01, 2003 11:10 AM
Subject: [picsig] Newbie question Was Fw: Serial cable for PIC-E

>
>
>
> Hi,
> someone can explain to me what is exactly the PIC-E, and for what
> applications?
> If may be in spanish, twice good ;-)
>
> Bye
> ----- Original Message -----
> From: "Neville A. Cross" <yn1ncv@arrl.net>
> To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
> Sent: Friday, March 28, 2003 4:27 PM
> Subject: [picsig] Serial cable for PIC-E
>
>
> Hello,
>
> I ordered via Internet a PIC-E. I built the kit as soon as I got it. Know
> that I am ready for running the diagnostic I notice that I have no idea
> what kind of serial cable do I have to use. I have one cable for external
> modems, like those that you can purchase for use a TNC and I also have one
> straight serial cable (where each pin go to the same pin on the other
side).
>
> As I am in Nicaragua, and as far as I know is the first PIC-E over here, I
> have no elmer to ask about this.
>
> Thanks very much for your help.
>
> Neville A. Cross
> YN1NCV
> Managua, Nicaragua
>
>
> ---
> You are currently subscribed to picsig as: hjmhs@yahoo.com.ar
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>
>
> ---

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11. [picsig] RE: picsig digest: April 04, 2003

From: "Lee De Vries" <LDEVRIES@gordontafe.edu.au>
Date: Mon, 7 Apr 2003 11:57:56 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127727-2003.04.06-21.49.13--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just one other little tip.

Never play around with the Code Protection fuse to see what it does.
It will permanently make your PIC totally unreadale and for ever unwritable.

Lee de Vries

VK3PK

-----Original Message-----
From: Darryl Smith [mailto:Darryl@radio-active.net.au]
Sent: Saturday, 5 April 2003 3:46 PM
To: TAPR PIC Development Special Interest Group
Subject: [picsig] RE: picsig digest: April 04, 2003

Karl

I am about 6 months ahead of you... So I can offer some suggestions...

1. Buy a copy of CCS C compiler... The cheapest version

2. Get a very short hair cut... It is better not to have hair to pull
out :-)

3. Look at the questions asked on this sig in the last 6 months...

4. I use a separate DOS computer for programming PIC's... Don't know if
that is better, but it gives exercise walking from the PC to the
programmer.

5. Some errors in code are just problems choosing what fuses to blow

6. MCLR should usually be pulled to one of the rails...

7. Don't buy the PIC book by Pedeko.... Unless you need a stand for a
computer monitor... The book teaches you more on 8086 programming in the
first 100 pages.

Good Luck

Darryl Smith, VK2TDS POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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12. [picsig] Re: Newbie question

From: " Hugo J. Müller " <hjmhs@yahoo.com.ar>
Date: Sun, 6 Apr 2003 22:31:19 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127732-2003.04.06-22.08.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Well, thanks by the explication. Very clear.

What kind of licence have PIC-E ? It's freely available for
personal/Commercial purposes or not ?

TIA

Hugo
----- Original Message -----
From: "Barry Gershenfeld" <mailist@san.rr.com>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Saturday, April 05, 2003 11:51 PM
Subject: [picsig] Re: Newbie question

>Hi,
> someone can explain to me what is exactly the PIC-E, and for what
>applications?
>If may be in spanish, twice good ;-)

Well, my knowledge Spanish is probably a little less than that of the PIC-E,
but I looked at the manual to make sure I was mostly right.

This board has a serial port that can take data from a GPS receiver, and
a modem chip that can send packets right into the mic jack on your
transceiver. So you can transmit your location using packet radio.

But wait, there's more. The serial port is really a PIC microprocessor, and
the designers saw to it that it could be programmed to do whatever you
want. I checked the ftp site and it seems there is a lot of software people
have contributed.

I learned all this by reading the manual. Go to the tapr site, click on the
PIC-E link, and download the manual. It's all there, even the schematic.

73,
Barry

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---
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13. [picsig] Re: Newbie question (EN ESPANOL)

From: " Hugo J. Müller " <hjmhs@yahoo.com.ar>
Date: Sun, 6 Apr 2003 22:17:19 -0300
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127734-2003.04.06-22.09.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hola Scott:
   te agradezco infinitamente a ti y a quienes me han contestado porque
ahora tengo una visión más amplia de PIC-E y puedo seguir investigando al
respecto.
  Te escribo mas extensamente en privado.

Hugo

----- Original Message -----
From: "Scott Johnson" <kd5mhm@kd5mhm.org>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Sunday, April 06, 2003 8:18 PM
Subject: [picsig] Re: Newbie question (EN ESPANOL)

Hola Hugo,

El Pic-E es una producto del organization TAPR, para usar el sistema APRS
(posicion reportada automatica por radio). El Pic-E provide todo lo
necesario para conectar un unidad de GPS al radio, y transmitir su posicion.
Uno pueda pensarlo como un modem para el radio. (Me faltan muchas palabras
en Espanol para describirlo bien, lo siento.)

Yo tengo dos que compre hace unos anos. Viene en partes y hay que
asemblarlo, probarlo y programarlo. Era muy facil, pero seria mejor conocer
un poco de lo electronico antes.

Lo mas deficil es conectarlo al radio, porque las conecciones son diferentes
para cada radio, pero y aun esto no es mucho...

Escribame directament y puedo esplicar mas...

Desculpeme mi lengua mala, pero a lo menos requerdo un poco todavia...

Y, una pregunta. porque hablas Espanol con un apellido Aleman?

Hasta entonces,
Scott
kd5mhm

----- Original Message -----
From: "Hugo J. Müller" <hjmhs@yahoo.com.ar>
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Sent: Tuesday, April 01, 2003 11:10 AM
Subject: [picsig] Newbie question Was Fw: Serial cable for PIC-E

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> Hi,
> someone can explain to me what is exactly the PIC-E, and for what
> applications?
> If may be in spanish, twice good ;-)
>
> Bye
> ----- Original Message -----
> From: "Neville A. Cross" <yn1ncv@arrl.net>
> To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
> Sent: Friday, March 28, 2003 4:27 PM
> Subject: [picsig] Serial cable for PIC-E
>
>
> Hello,
>
> I ordered via Internet a PIC-E. I built the kit as soon as I got it. Know
> that I am ready for running the diagnostic I notice that I have no idea
> what kind of serial cable do I have to use. I have one cable for external
> modems, like those that you can purchase for use a TNC and I also have one
> straight serial cable (where each pin go to the same pin on the other
side).
>
> As I am in Nicaragua, and as far as I know is the first PIC-E over here, I
> have no elmer to ask about this.
>
> Thanks very much for your help.
>
> Neville A. Cross
> YN1NCV
> Managua, Nicaragua
>
>
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14. [picsig] Kam Decoding from Pic-E

From: "Darryl Smith" <Darryl@radio-active.net.au>
Date: Mon, 7 Apr 2003 15:23:27 +1000
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127757-2003.04.07-01.13.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>I have just finished building my Pic-E. All checks okay and programmed
the
>Pic fine. Loaded the software GPS-E-2 and the unit transmitting into my
rig
>DR-140. But I cannot decode the packets across the shack. I hear the
>packets going out fine on the monitor and the KAM lights up on the
received
>signal. I am using separate receiver,the Kam into UI-View and it works
okay
>with tinytrak. Is there some tweaking on the Pic-E board that I have
>forgotten?

I know that some TNC's do not like to send more than one flag character
before a packet... Some TNC's need more than one. Often they need up to
six.... This is often the issue. The solution is to send another few
flags before sending the packet.

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au

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15. [picsig] Selling My PIC-E boards

From: "David Boswell" <bozwell@gte.net>
Date: Mon, 7 Apr 2003 0:28:19
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127759-2003.04.07-01.18.49--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm moving to a different PIC controller and would like to sell my boards
to someone looking to start.

These boards are PIC-E's fully assembled.

You can find them on eBay under PIC.

I really like the design of these boards kudos to the project team.

Look at http://www.kd7lmo.net/nsrv.html and www.ansr.org to an interesting
high altitude balloon with packet and IRLP capabilities.

73

kd7kas

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16. [picsig] Re: Just Beginning

From: Karl Verren <kn6cw@antelecom.net>
Date: Mon, 07 Apr 2003 05:43:26 -0700

To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127771-2003.04.07-08.33.55--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Mark,

I am simply trying to create a stand alone "position beacon". I want to use a GPS receiver and the TAPR PIC-E controller to send "packetized" data to 2 meter transciever, so as to transmit a vehicle's position at regular intervals. I feel that this is basically a simple task, but when you are a simpleton then the task becomes huge. Thanks for any help you can offer.

Karl
KN6CW/AAR9ZH
At 08:32 AM 4/5/2003 -0600, you wrote:
>Karl,
>I'm not really sure what you are looking for. Are you looking for a TNC in
>order to decode your data? OR are you looking for a dummy set of GPS data
>to feed into the PIC-E for testing?
>
>AGWPE will act as a TNC using your sound card.
>
>http://www.cheavens.com/mark/radio/packetradio/gps69.zip
>
>This is a data set from a GPS that has been looped around. It will show
>your position on US59 on the southwest side of Houston, TX
>
>To use it, connect your PIC-E with a null modem cable to your computer. Use
>hyperterminal (or similar) and "send as text" the text file within the zip
>above. Your valid LED should light right away.
>
>Mark Cheavens
>KC5EVE
>
>>Subject: Just Beginning
>>From: Karl Verren <kn6cw@antelecom.net>
>>Date: Fri, 04 Apr 2003 21:00:23 -0800
>>X-Message-Number: 1
>>
>>   Dear List Members,
>>
>>   I have just finished building the PIC-E and I need to find a
>> programming
>>guide or a simple program to act as a TNC for a GPS receiver in APRS
>>service. I simply want to beacon the GPS's position every two minutes or so
>>on 144.390. To compound matters a bit, I am also using a Windows XP
>>operating system on the computers here. Is ther anyone with some straight
>>foreward advice for a situation like this ? Thanks in advance for your
>>help.
>>
>>
>>
>>
>>---
>>
>>END OF DIGEST
>>
>>---
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>
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17. [picsig] RE: picsig digest: April 04, 2003

From: Karl Verren <kn6cw@antelecom.net>
Date: Mon, 07 Apr 2003 05:49:07 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127776-2003.04.07-08.39.39--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Darryl,

        I will be talking to you some more on this topic and I appreciate your
guidance. I will be gathering some more information as you suggested and
after I get a little less ignorant I will come back with more questions.
Thanks for your help so far.

Karl
KN6CW/AAR9ZH
At 03:46 PM 4/5/2003 +1000, you wrote:
>Karl
>
>I am about 6 months ahead of you... So I can offer some suggestions...
>
>1. Buy a copy of CCS C compiler... The cheapest version
>
>2. Get a very short hair cut... It is better not to have hair to pull
>out :-)
>
>3. Look at the questions asked on this sig in the last 6 months...
>
>4. I use a separate DOS computer for programming PIC's... Don't know if
>that is better, but it gives exercise walking from the PC to the
>programmer.
>
>5. Some errors in code are just problems choosing what fuses to blow
>
>6. MCLR should usually be pulled to one of the rails...
>
>7. Don't buy the PIC book by Pedeko.... Unless you need a stand for a
>computer monitor... The book teaches you more on 8086 programming in the
>first 100 pages.
>
>Good Luck
>
>---------
>Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
>Mobile Number 0412 929 634 [+61 4 12 929 634 International]
>Darryl@radio-active.net.au | www.radio-active.net.au
>
>
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18. [picsig] RE: Just Beginning

From: "Rich Carter - KE1EV" <ke1ev@arrl.net>
Date: Mon, 7 Apr 2003 09:19:41 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127780-2003.04.07-09.08.01--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I don't think the existing kit will do what you want.   It doesn't have
sufficient memory to receive. There should be a new kit available very soon
that may meet your needs.

Rich Carter
KE1EV

> -----Original Message-----
> From: bounce-picsig-21297@lists.tapr.org
> [mailto:bounce-picsig-21297@lists.tapr.org]On Behalf Of Karl Verren
> Sent: Saturday, April 05, 2003 12:00 AM
> To: TAPR PIC Development Special Interest Group
> Subject: [picsig] Just Beginning
>
>
>   Dear List Members,
>
>   I have just finished building the PIC-E and I need to find a programming
> guide or a simple program to act as a TNC for a GPS receiver in APRS
> service. I simply want to beacon the GPS's position every two minutes or so

> on 144.390. To compound matters a bit, I am also using a Windows XP
> operating system on the computers here. Is ther anyone with some straight
> foreward advice for a situation like this ? Thanks in advance for your help.
>
>
> ---
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19. [picsig] Re: Just Beginning

From: Barry Gershenfeld <mailist@san.rr.com>
Date: Mon, 07 Apr 2003 08:44:20 -0700
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127799-2003.04.07-11.34.57--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I don't get it. Isn't Karl describing what the PIC-E does already? The only
difference I see is that maybe it doesn't "beacon" but only transmits when
you PTT your mic.   A change like that would be fairly simple and it would
surprise me if no one's done that.   And there is a programmer that runs
in Windows.

Barry

>   I am simply trying to create a stand alone "position beacon". I
> want to
>use a GPS receiver and the TAPR PIC-E controller to send "packetized" data
>to 2 meter transciever, so as to transmit a vehicle's position at regular
>intervals. I feel that this is basically a simple task, but when you are a
>simpleton then the task becomes huge. Thanks for any help you can offer.
>
>Karl
>KN6CW/AAR9ZH

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20. [picsig] Re: Kam Decoding from Pic-E

From: "Tom Frawley" <tomski1@eircom.net>
Date: Mon, 7 Apr 2003 16:26:27
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127827-2003.04.07-17.17.01--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Darryl,
Many thanks for your speedy reply to my message re pic-e decoding problem.
I have now loaded the excellent software by John Hansen GPS-E-2G a revision
which has extra flags in the packet. I had originally loaded the 2A
version.
Everything working fine now, Pic-E tx'ing okay with perfect decoding at the
receiving end.

Again, many thanks for putting me on the APRS trail. . . . . Tom

---
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21. [picsig] help needed for interfasing a GPS

From: "Neville A. Cross" <yn1ncv@arrl.net>
Date: Mon, 07 Apr 2003 19:55:58 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127865-2003.04.07-22.46.50--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have tested the PIC and all the leds flashed happily.

I programed the PIC with the program GPS-E-2A, generating the Hex fileusing
GPS-E-2A.EXE and then uploading the hex file to the pic with the PICPROG.

I connected the radio, and the GPS and nothing happened. I have a Garmin
e-Trek with the power and serial cable with a DB9 built in. The ping does
not match, so i made a jumper with two DB9 to sort the wiring out.

Can any body tell me wich setting I have to use? NMEA, text or what?
1200bps, 4800bps or what?
I also noticed that the PIC has a Data Ready pin and the GPS does not. It
is needed?

Some time ago I succesfully use this GPS with a KPC-3+, so it is not my
firts wiring ...

Any ideas ??

Thanks in advance

Neville A. Cross
YN1NCV
Managua, Nicaragua

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To unsubscribe send a blank email to leave-picsig-6890E@lists.tapr.org

22. [picsig] boards clarification

From: "David Boswell" <bozwell@gte.net>
Date: Tue, 8 Apr 2003 18:39:30
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-127936-2003.04.08-19.30.03--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I posted earlier that I put my boards up for auction on eBay.
I checked and the best way to search is PIC controller. Turns out pic is
also used in titles for picture.

73

kd7kas

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23. [picsig] Digital BASH at Hamvention

From: John Ackermann N8UR <jra@febo.com>
Date: Fri, 11 Apr 2003 16:40:06 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-128256-2003.04.11-16.39.46--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Announcing the 2003 TAPR Digital BASH!

What?
        An event for the digitally-inclined ham, featuring:
        * Buffet dinner
        * Keynote Address: A Software Defined Radio for the Masses,
            by Gerald Youngblood, AC5OG
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, May 16, 2003
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner

Where?
        Kohler's Banquet Center, 4548 Presidential Way, Kettering
        (39 40.75N, 84 08.43W), just south of East David Road between Far
        Hills Ave. and Wilmingon Pike. Maps available on the TAPR web site
        (http://www.tapr.org/tapr/dayton, follow the link at the bottom of the
page),
        or at the TAPR booth.

How?

Dinner requires advance registration and payment through TAPR.
Tickets will be available at the TAPR booth on Friday, though
we strongly encourage registration <before> Hamvention. The
cost is $25.00 per person, tax and tip included.

All amateurs are welcome to attend, enjoy the speaker, and
participate in the meetings, although only those purchasing a
dinner can eat.

To register, contact:
Digital BASH
c/o TAPR
8987-309 E. Tanque Verde Road #337
Tucson, AZ   85749-9399
Phone: 972-671-TAPR (8277)
Fax: 972-671-8716
Internet: tapr@tapr.org

Visa/Mastercard Accepted

Who?
PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
Radio, the national leader in digital communication -- and the
Miami Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/dayton,
 or send email to tapr@tapr.org.

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24. [picsig] Packet Status Register deadline nears

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Mon, 21 Apr 2003 19:38:40 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-129454-2003.04.21-19.42.51--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The deadline for the next issue of Packet Status Register (PSR), TAPR's
quarterly newsletter, is Thursday, April 24, so please get your submissions
to me as quick as a bunny!

73,

Stan, WA1LOU

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May 2003

Original source file: picsig.0305
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/picsig/mail_archive/picsig.0305

1. [picsig] email change

From: MTWAL <MTWAL@cc.usu.edu>
Date: Thu, 01 May 2003 14:37:00 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-130993-2003.05.01-16.29.14--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello everyone,

sorry for the email. I'm just emailing myself and all of you so I can save
all of your addresses when I lose my old school account. I'm graduating so I
have a temporary account. It's in the TO box. mattnaub@yahoo.com.

thanks,

Matt

Matt Waldron
245-2761
mtwal@cc.usu.edu

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2. [picsig] Spring 2003 issue of Packet Status Register (PSR) now available

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Mon, 05 May 2003 20:00:28 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-131522-2003.05.05-19.55.53--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Spring 2003 issue of Packet Status Register (PSR), TAPR's quarterly
newsletter is now available at the TAPR web site (www.tapr.org).

This issue of PSR has the following contents:

802.11b Used in Ham's Shuttle Recovery Efforts by Doug Kilgore, KD5OUG

A New Tactical Reporting Protocol by Scott Miller, N1VG

Announcing N2YGK's Linux aprsdigi Version 2.4.3   3 by Alan
Crosswell, N2YGK

APRS IP Mobile in a Non-Dynamic Wireless Environment or 802.11 APRS by
Darryl Smith, VK2TDS

Portable Tactical Digital Communications Using Off-the-Shelf Consumer
Components by Ed Carp, N7EKG

President's Corner: Dayton, Directors and the DCC by John Ackermann, N8UR

Real Networking: Is It the Key to Keeping & Reviving Packet? by Ron Sauer,
K9RKI

Revitalizing "Plain" Packet by Jim Wagner, KA7EHK

TAPR and ARRL 22nd Annual Digital Communications Conference

TAPR Membership by Darryl Smith, VK2TDS

TAPR Order Form

WA8WDQ Replaces K0PFX on TAPR Board

Welcome to Jeannie, The House That Listens by Don Marquardt, K9SOA

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3. [picsig] Last Reminder: Hamvention Digital Bash!

From: "John R. Ackermann N8UR" <jra@febo.com>
Date: Tue, 13 May 2003 10:15:19 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-132604-2003.05.13-10.11.13--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just a reminder that the annual TAPR Digital BASH will be held Friday
evening at Hamvention. Our keynote speaker will be Gerald Youngblood,
AC5OG, who will describe -- and demonstrate -- his HF software defined
radio, the SDR-1000. I have been playing with the SDR-1000 myself, and it
is a real step forward for ham SDR experimentation. If you're at
Hamvention, you'll want to hear Gerald and see the radio in action.

Tickets are $25 and will be available at the TAPR booth up until about 3:45
Friday afternoon, when we have to call in the final count. Directions to
the banquet hall will also be available at the booth.

And, remember that TAPR will have a bigger and better presence at
Hamvention this year. Our new booth spaces are 607, 608, and 615, just a
little bit down and over from our old spot.

See you there!

73,
John N8UR

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4. [picsig] Call for Papers

From: Stan Horzepa <stanzepa@earthlink.net>
Date: Tue, 20 May 2003 20:45:42 -0400
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-133574-2003.05.20-20.50.27--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Technical papers are solicited for presentation at the 22nd Annual ARRL and
TAPR Digital Communications Conference to be held September 19-21, 2003 in
Hartford, Connecticut, and publication in the Conference Proceedings. Annual
conference proceedings are published by the ARRL. Presentation at the
conference is not required for publication. Submission of papers are due by
August 5th, 2003 and should be submitted to:

Maty Weinberg, ARRL
225 Main Street
Newington, CT 06111

or via the Internet to
maty@arrl.org

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5. [picsig] How do I hook up PIC-E to Icom IC-207H ?

From: "WILL AUSTEN" <wausten@optonline.net>
Date: Thu, 29 May 2003 9:2:5
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134820-2003.05.29-09.55.00--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am pretty new to all this. I was given a PIC-E. I need to hook it up to
use as a tracker for an event this Sunday. I will be using this with a
IC-207H. I am not sure how to cross wire the DIP sock J3 in order to get
it to work with my radio. I would also like to know what software to use
to up load from my PC which is running WinXP to the PIC-E and also what is
the best choice of software from the choices on the TAPR ftp site to use
this as a (Mic-E) Tracker. Thanks in advance for any and all help. N2UXJ

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6. [picsig] Chip Damaged

From: "Neville A. Cross" <yn1ncv@arrl.net>
Date: Fri, 30 May 2003 06:32:10 -0600
To: "TAPR PIC Development Special Interest Group" <picsig@lists.tapr.org>
Message-ID: <LYR6890-134963-2003.05.30-09.24.29--lyris.picsig#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello to all,

I ensambled a kit a run electrical test and everything seemed allrigth. At
the point of starting operations I was unable to make it work. I got help
from a fellow ham in Costa Rica who swap his chips with mines and turned
out that the programable chip is not working properly.

Can anybody tell me the part number, description and where can I buy it
from internet?

Thanks in advance

Neville A. Cross
YN1NCV
Managua, Nicaragua.

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